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AMERICAN ARTISAN and Hardware Record

VOL 76. No. 6. 620 SOUTH MICHIGAN AVENUE, CHICAGO, AUGUST 10, 1918. $2.00 Per Year.

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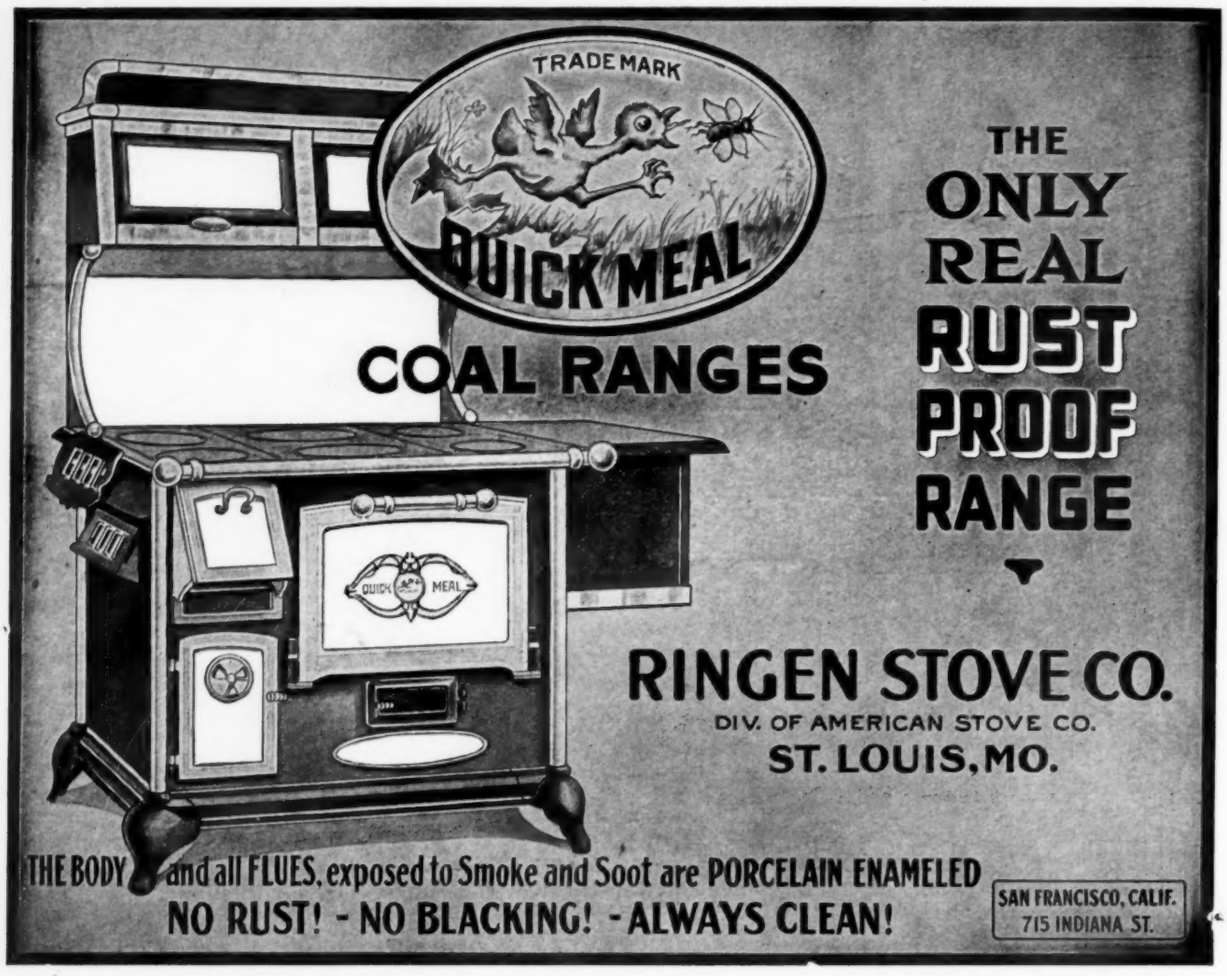
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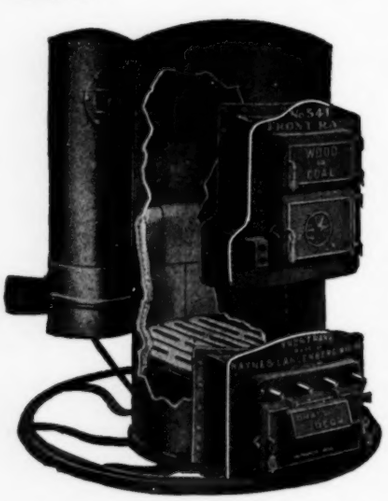

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VOL. 76. No. 6. CHICAGO, AUGUST 10, 1918. $2.00 Per Year.

Is Against A Minimum Wage Basis.

AN ENCOURAGING feature of the Government's temporary control of industry is to be found in the action of the National War Labor Board against establishing at this time a minimum wage to be applied generally throughout industry. It announced that the question of the determination and application of a fair living wage would be decided in each case on the basis of the particular facts ascertained. At the same time, however, the board adopted a resolution, written by former President William H. Taft, and submitted jointly by Mr. Taft and Frank P. Walsh, the joint chairmen, in which the attention of capital and labor is invited to the wisdom of composing their differences upon the basis of the principles and policies of the board as approved and promulgated by the President in his proclamation of April 8, 1918.

In this resolution the War Labor Board adopts an attitude firmly opposed both to unjust profits on the part of capital and unreasonable demands on the part of labor, stating that capital should have only such reasonable returns as will assure its use for the world's and the nation's cause; and that the physical well being of labor and its physical and mental effectiveness, in comfort reasonable in view of the exigencies of the war, should likewise be assured.

In so many words, the board declares the war to be an interregnum in which the wheels of industry should turn only in the common cause and for common ends, and neither for unjust profits on the part of capital nor unfairly inflated wages on the part of labor, stressing maximum production as the paramount necessity and unselfish co-operation as the preliminary essentials to this accomplishment.

The adoption of the resolution marks the end of a lengthy discussion of the question of declaring and establishing a fixed amount as the minimum to be paid any workman in the United States.

It reaffirms, however, the principle that the worker is entitled to a wage sufficient to sustain himself and his family in health and reasonable comfort and restates the purpose of the board to apply the principle in each of the cases to come before it for decision.

Money Values.

AMONG THE many economic problems which must be solved at the close of the war, by far the most important is a determination of the permanent value of the dollar. This becomes apparent when one considers the likelihood of a decline in wages and prices of commodities after the war. To what extent this decline will go cannot be predicted with any measure of accuracy. This uncertainty will, no doubt, operate to prevent too sudden and great an increase of commercial expansion. Everybody will want to be active, to do business, and fear as to values will be the only restraining influence.

It would seem to be a wise course during the war, therefore, to hold down both wages and commodity values. If such a policy be pursued with vigor, the readjustment may not need to be a very extensive one, for the reason that there will be important new influences, that did not obtain before the war, tending to support high prices.

First, it must be recalled that our Federal Reserve system went into effect after the war started. We did not have it at all before the war. It tends to make credit good and provide capital. Second, there will be tens of billions of Liberty Bonds, available as collateral. How many families in the United States are today saving money and buying Liberty Bonds, with the intention, after the war, of borrowing money on them to build a home or buy an automobile and pay off the loan by continuing to save? Third, Government disbursements will be very heavy after the signing of the treaty of peace. It will cost billions of dollars to demobilize.

There is, therefore, a distinct prospect that the shock of readjustment, of finding out what the value of the dollar is going to be in future, may not be such a great one after all.

There will be the greatest stimuli to business activity since the world began. The fighters will want to work. Work will seem the easiest thing in the world. We are fighting to make the world a safe and decent place to live in. We shall work to make it an attractive place to live in. That there will be an orgy of indulgence, of personal extravagance, seems an absurd idea. There will be the remembrance of too much suffering. We shall go home from the funeral not to feast but to do our duty to those who are left and honor the memory of those that are gone.

Of the great stimulus to international trade, ships, there will be plenty. A year or more ago our bent was to end the war before the world's shipping was too greatly reduced. Now our bent is to expand it to unprecedented proportions. Means of communication within our borders will be much better than ever before. The railroads are hauling more than one-third greater ton-mileage than at any time before the war, and are to be improved further. Everyone has learned to work harder. Factories have been made more ef-

ficient. Many bad practices built up under the competitive system, of wasteful making and carrying in stock of a wide variety of sizes and patterns are being eliminated by the conservation division of the War Industries Board. This makes for efficiency, elimination of waste promoting trade.

We Need To Co-operate.

A NEW EDGE has been put upon the word co-operation. Its meaning has been sharpened for us. Trade associations everywhere throughout our land are realizing its significance and necessity. If we consider co-operative organization in the light of the lessons already taught by the war, its merit becomes so conspicuous as to be wholly beyond the need of additional demonstration. Other and even more powerful lessons upon this point will be given before the end of the war, and it is highly probable that when the world once more emerges from its period of madness and goes back again to the ways of peace and security, the task of convincing men of the desirability of getting together in the interests of higher efficiency and greater peace and happiness will be much easier than it has been in the past.

There are those who say that the war has a well worth-while side—that its foundation is not in chaos, but in the same great plan in which men and institutions and nations and successes and failures are mere details—that in the fuller vision of the future, the fact of the war's value to humanity and the world will stand out clearly and unmistakably. Whether or not justified upon this theory, and whatever the good which may come out of it, the war at least will serve to show men the weakness of things they had believed strong, and the insufficiency of things they had come to consider sufficient.

Beyond a shadow of doubt, we shall have learned that the purpose of all our striving in this world is to make life more pleasant, more comfortable, more joyous, and more serene. Business has no other justification. Happiness is essentially a social and collective achievement. Hence the necessity of co-operation to obtain it and to foster its development among the units of the nation.

Moral Value.

WE ARE LEARNING the value of our democracy in a way so clear and convincing that the war may almost be said to have adequate compensation for what we are spending in men and money. First and foremost, is the convincing proof one year of war has given, that our long continued national expenditure in behalf of education, through support of public school systems, universities and other institutions of learning, coupled with our equally liberal support of the great organizations designed to build up the moral fiber of the people, has been one of the best investments ever made by a people; and that, as a result largely of this great investment in support of what may be called the moral and intellectual agencies, our Republic has responded to the call of the authorities in a supreme crisis, in a manner unparalleled in the history of the world. Oversubscription of great loans, the creation of our selective draft army and the transportation of nearly a million men overseas are well-nigh miraculous in their quality of promptness of execution, and the cheerful submission of the people in making such executive work possible.

This object lesson in the workability of our great Constitution, this splendid testimony to the far-sighted plans of the founders of the Republic, should renew faith in the heart of every American and give every citizen new courage to face the future without fear and with the manly heart. But along other lines, and in an equally important manner, America has gained greatly through certain events of record abroad during the course of the past year. All forms of invested capital, whether invested in those industries which are active and aggressive or in a secondary and less aggressive form of investment, such as securities or real estate, have been under threat for years through the preaching in America of anarchistic and extremely socialistic doctrines. Class hatreds were being developed rapidly, sectional antagonisms fanned. Many well-meaning but ill-balanced men and women, who at heart were Americans in instincts and ideals, have been won over by the glamor of the new order which promised "everything to everybody without anybody doing anything." A number of these new leaders of the new thought, these real enemies of real progress, these destroyers of liberty under law through the preaching of a lawless liberty, transferred the scene of their operations to Europe with the collapse of the Russian government, and the whole world has witnessed the theories preached by these men put into action under the direction of the would-be leaders of the new form of government. The result of this object lesson has been to awaken to a true realization of what anarchy or advanced socialism really means, many who are honest converts in America. It has given a new courage to those who have always believed in law and order, and it has averted, perhaps, an experiment in certain parts of the United States along the same Bolshevik lines of theory now operating in Russia.

Conservative advices from Russia, and the reports of men who have recently returned from that great country, are to the effect that a great awakening is taking place among the peasantry of Russia, for years fed on this utopian talk by socialists and anarchists. Now these leaders, with full power to act, are powerless to bring to the downtrodden that easy way of life they had pictured so vividly and promised so faithfully if once given opportunity to act or lead. As a net result of the great Russian collapse, then, America has escaped possibility of Bolshevik trouble within her own limits, while the foundation has been laid in Russia for a real governmental advance through disillusionment of her people as to the powers of a man in authority, by a mere mandate, to relieve all humanity of necessity to labor or to live a law-abiding life.

America has thus fallen heir to a wonderful inheritance of the law-abiding spirit as a direct result of this Bolshevik experiment in Russia, and all legally constituted government stands more firmly based through the world today than ever before in the world's history. The greatest of all benefits already won by America from her world war experience is

the convincing proof which a cold record of facts affords, that a nation which has devoted its largest powers to the development of commercial interests can, at the call of duty, become on the instant a nation of patriots, willing to sacrifice everything that commercial triumph has won to defend the highest ideals, to protect for the peoples of the world the greatest of all gifts—the right to life, liberty and the pursuit of happiness. Once more in the history of the world the test of blood and pain and tears has proven that the great moral sentiments are the only real foundation for any nation.

RANDOM NOTES AND SKETCHES.

By Sidney Arnold.

Culture may be defined as one's personal development plus one's intellectual and artistic inheritance. It is essentially cumulative. It implies foregoing efforts toward refinement and ethical strength. Secretary of War Baker puts it concisely and clearly when he says that "in this war we are feeling for the first time the power of a background of which we have scarcely been conscious. For the splendid spirit of our men and women today we have the whole history of our country to thank."

* * *

Every girl considers herself attractive, according to my friend George T. Bailey of the Oliver Iron and Steel Company, Pittsburgh, Pennsylvania. A young chap of his acquaintance was talking to a girl and, in the course of the conversation, remarked:

"I dreamed last night that I proposed to a beautiful girl."

"And what did I say?" she queried, breathlessly.

* * *

It makes me happy to be remembered by old friends and to be privileged to rejoice with them in their good fortune. That is why I was glad to receive a telegram from F. A. Heitmann, of Houston, Texas, member of the Executive Committee of the National Hardware Association, telling me of the birth of a son, Frederick William Heitmann, and saying that mother and child were in the pink of health.

* * *

My friend Colonel William A. Lockwood of John H. Graham and Company, New York City, is an extremely modest angler. In the lobby of the Auditorium Hotel, Chicago, I noticed him listening the other day to a group of returned campers who were telling of the big ones they had caught. After a while, one of the group turned to the Colonel and asked him if he had caught anything worth mentioning on his recent fishing trip.

"Only one worth mentioning," the Colonel replied. "The river fell six inches when I landed him."

* * *

It isn't always advisable to dispense information too freely, says my friend William Wynn, president Scheible-Moncrief Heater Company, Cleveland, Ohio. By way of illustration, he tells this incident:

Johnny was crying in the hall as his mother came along, hatted and coated. She asked what had happened.

"You are going away and so is papa," Johnny sobbed.

"Why, child, I shall be away two or three days, but father is not going away."

"Yes, he is!" cried Johnny. "He's going to Rome."

"Rome? What do you mean, dear?" asked the surprised mother.

"He said to-day to Mr. Brown that he would make Rome howl when you left!"

"Indeed! Well, dear, I shan't leave you now."

* * *

A returned soldier told my friend Charles Peffly of George M. Clark and Company, Chicago, Illinois, this story of misdirected philanthrophy:

A lady visitor at one of the base hospitals greatly annoyed some of the patients by her persistent questioning—and "asked for" some of the answers she received.

"Did you ever kill a German?" she asked a wounded Yankee.

"Why, missus," he replied, "the mattress we sleep upon are stuffed with the whiskers of the Germans I have killed!"

* * *

My friend O. W. Kothe, proprietor of the National School, St. Louis, Missouri, tells about a Sunday school teacher who was quizzing her class of boys on the strength of their desire for righteousness.

"All those who wish to go to Heaven," she said, "please stand."

All got to their feet but one small boy.

"Why, Johnny," exclaimed the shocked teacher, "do you mean to say that you don't want to go to heaven?"

"No, ma'm," replied Johnny promptly. "Not if that bunch is going."

* * *

Apropos of knowing one's subject thoroughly, my friend W. J. Burton of the W. J. Burton Company, Detroit, Michigan, tells this story:

The teacher was examining the class in physiology.

"Mary, can you tell us," she asked, "what is the function of the stomach?"

"The function of the stomach," the little girl answered, "is to hold up the petticoat."

* * *

Sarcasm at the expense of others is about as mean and disgusting a thing as can be imagined—especially when the object of it is some chap who is doing the best he can. I seldom care much for verse in dialect, but the following lines are worth repeating because they convey the thought that I am trying to express and they do it in a sturdy, forthright way:

When a Feller Is Doin' His Best.

When a feller is doin' the best that he kin,
A-singin' a song or a shovelin' dirt,
Some feller that thinks he is smart will begin
A-bein' sarcastic an' tryin' to hurt.
This life that we live has a wonderful way,
As you pause to observe it, it seems kind of queer,
The feller that's toilin' along day by day
Must furnish the topics fur fellers that sneer!

The feller that toils has his eyes on the ground,
And scarcely observes what is passin' him by,
Till night with its rest an' its silence drifts 'round,
An' then he looks up at the stars in the sky,
He's right unsuspicious, that dull, ploddin' chap,
And—honest, it does seem a sort of a sin,
To ketch him unwary, and hand him a slap,
When a feller is doin' the best that he kin.

UP TO THE MINUTE NEWS SIFTINGS

GIVES REASONS FOR MOBILIZING OUR MAN POWER TO FILL OUR MERCHANT SHIPS.

Every business man in America has a vital interest—directly or indirectly—in the commercial activity of our country after the war. We are all facing new problems. For their solution national co-operation is essential. The big problem is that of markets for our surplus products. This is primarily a question of mobilizing our man power to fill our merchant ships. An illuminating discussion of the subject by Edward N. Hurley, chairman United States Shipping Board, is here set forth for the consideration of our readers:

With something like 25,000,000 tons of merchant shipping to be employed inside of two years, the United States Shipping Board feels that it is none too early to look around for cargoes, both in this country and abroad. With the task of building the ships in charge of the Emergency Fleet Corporation, under the leadership of Charles M. Schwab, this function of the United States Shipping Board begins to attain prominence—and that is what the shipping board was originally created for by Congress.

Twenty-five million tons is a lot of shipping. In one voyage these ships would carry all the live stock, dressed meats, packing-house products, poultry, game, fish, wool, hides, and leather carried on our railroads in one year. In less than five trips they would carry our whole yearly railroad haul of grain, flour, cotton, hay, fruit, vegetables, and other farm products; in thre and one-half trips all our lumber; in seven trips all our manufactured goods; in sixteen trips all our coal and coke. The total tonnage hauled on our railroads is about 1,200,000,000 tons.

So, amid all his splendid effort in producing equipment to win the war, the American manufacturer must be asked to take thought for tomorrow and think in terms of shipping and foreign trade. This might appear like a distraction now—something which will take the attention from the supreme duty of winning the war. But far from being a distraction, it fits in with war production and war psychology. While our factories and factory employes are building war material today, they are also building foreign trade, if we can only see things whole and make one factor work with another.

When the business man turns his attention to export trade he looks abroad and thinks of foreign customers. But foreign trade actually begins in his own factory. He looks abroad and studies such factors as ocean freights, foreign exchange, export packing, and international salesmanship. If he would look into his own factory first, and study factors close at hand, such as labor turnover, wages, manufacturing costs and efficiency, he would be laying solid foundations for export trade.

In a recent study of factors that make successful, lasting foreign trade, Prof. Taussig places first of all the element of manufacturing "effectiveness," as he calls it, which he defines as a combination of capital, labor, invention, salesmanship, and transportation, all working together under first rate business leadership, to make goods capable of holding markets in competition with the products of other nations. These elements of effectiveness are largely right at hand in our factories—it is not necessary to send anybody abroad to find them. And as an illustration of how nations make mistakes in trying to build foreign trade at the other end, Prof. Taussig shows that real effectiveness in manufacturing almost invariably holds its own against artificial devices for building foreign trade, such as export bounties, special railroad rates on export shipments, cut prices, discriminatory tariffs, etc.

With the bugaboo of cheap foreign labor haunting us in former years, we got into the way of thinking that export trade necessitated some lowering of wages and American living standards. Probably that was crooked thinking before the war. Certainly it is crooked thinking now, for the war is bringing other nations closer to our American standards of wages and living.

True development of foreign trade in our factories means better and better American standards.

In most of the countries of the world there will be a decided shortage of labor after the war. That country will best succeed which protects its workmen by improving their living conditions, guaranteeing a fair return for labor, protecting workmen and their families against accidents and idleness, and making workers better citizens. The country taking those measures will be the country that develops and makes products most economically, and will perform a world service by making goods at the prices fair to other nations.

Nobody has yet suggested sending cheap American soldiers over to France to win the war. Our men at arms are the pick of the country, physically and mentally. We take plenty of time to train them, make them specialists in every branch of fighting. We study them individually to find which are best suited for flying, for signalling, or bombing, or bayonet fighting. We recognize that modern war is a swift game, constantly changing, and that our soldiers must be prepared to learn new trades and new tricks from month to month, and we get ready to teach them these new trades, and also put them in a receptive attitude toward improvements in the fighting game. We feed them like fighting cocks, and spare no expense in clothing them or providing the latest fighting tools.

In the army and the navy we have a visible mobilization of man power for results in a foreign country. If we could have the same visible mobilization of man

power in our factories for foreign trade it would be a splendid object lesson for those who manage the factories and make the export goods.

To think of cheapness in connection with foreign trade is just as wrong as trying to pin bargain tags on soldiers. Foreign markets are not going to be won or held by cheapened American workers, or bargain methods in American life. As manufacturers, we have got to lay the foundations for foreign trade by going out into our factories and studying labor and costs together. We can sell our export products at reasonable prices by increasing wages along with output, and decreasing the losses caused by labor turnover, untrained workers, spoiled materials and other inefficiency.

Our experience along these lines in the Emergency Fleet Corporation has been most encouraging. With the task of creating new ship yards in a few months, and manning them with several hundred thousand workmen, most of whom came from other trades, we ran into about every difficulty, and problem, and tangle that could conceivably arise in management. On a large scale we effected an adjustment of man power such as is called for now in preparing the average American factory for the export trade which we will need to keep our ships employed.

To get production at unheard of speed and in record-breaking quantity, we did something simple and fundamental—and thoroughly human. This was nothing more or less than arranging wages so that, while our workers produced more for us, they were also able to produce more for themselves. We established the rule that a piecework wage rate set by any shipbuilder must stay in force during the period of the war. Any manufacturer who sets a piecework rate, and then reduces that rate if he finds that he has made a mistake against himself, is doing a great injustice to his employes. Profiting by our experience in the shipyards, I should like to see Congress pass a Federal law making it compulsory to keep every piece rate in effect one year. That would protect workers and furnish a real basis for increased production.

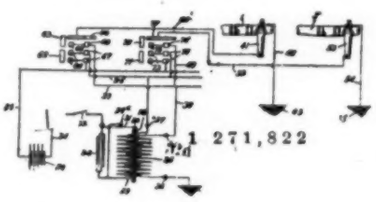
We found ourselves confronted with enormous losses and dangerous delays through lack of skill in special trades needed by workers in the shipyards, and also through the cost of labor turnover. To find 100 capable shipbuilders who would stick on the job it was necessary to hire and try, discharge or lose 1,000. Every manufacturer will recognize in these difficulties exactly the difficulties that he himself faces from day to day, and which put excessive burdens of cost upon his products. In the shipyards we got around those difficulties by establishing training centers for the various trades we needed, and also by appealing to the splendid spirit which lies in the average worker. We had to train everybody, from the boy who heats rivets right up—foremen and superintendents, and even executives. Starting with a little nucleus of skilled riveters, caulkers, reamers, carpenters and so forth, we took them out of the shipyard for a time and taught them how to teach their trades to others. Then they went back into the yards to teach green recruits, not in any school or class, but on actual ships, while doing the regular day's work. Under this system it was possible quickly to bring green gangs up to about 80 per cent of the efficiency of skilled workmen. As fast as these men learned their trades, and acquired high earning power under our protected piece rates, they became steady enough, and the costly item of labor turnover began to drop. After that, nothing more was needed but the appeal for patriotic service. We found that the shipworkers would not only stick on the job like soldiers, but that in their inherent spirit as fighters and loyal Americans there was an enormous reserve of man power to draw upon—a reserve capable of meeting every demand and every emergency, with power to spare.

That reserve of spirit exists in every American industry. War has brought it to light where executives can see it and to develop this great reserve for foreign trade is distinctly the executive's job.

To fill our merchant ships with goods after the war and hold our own in foreign markets, we must begin now to mobilize and train our man power in manufacturing along the same broad lines followed in training for military purposes. Wake up, American business men! Begin to study the man power in your own organizations. Not with the Prussian viewpoint, which counts human life its cheapest raw material in both the factory and the fighting line, but with the American viewpoint of decent living, opportunity, humanity, service.

SECURES PATENT RIGHTS FOR GAS RANGE LIGHTING APPLIANCE.

Nicholas Zam of Cleveland, Ohio, has secured United States patent rights under serial number 1,271,822 for a gas range lighting appliance of which the subjoined paragraphs are a description:

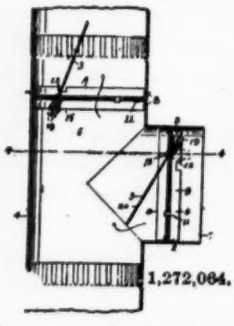


A gas-range lighting appliance comprising a burner, a valve having a limited range of movement for controlling the supply of fuel thereto, and an electrical device positively controlled by the movement of said valve in one direction for successively delivering sparks in ignitible proximity to said burner and at predetermined points with reference to the limits of movement of said valve.

A gas-range lighting appliance comprising a burner, a valve having stationary and movable parts for controlling the supply of fuel thereto, means for limiting the movement of said valve in both directions, and an electrical system including; a source of current, an induction coil primary and secondary contacts upon each of said valve parts, a plurality of sets on one of said parts being definitely arranged with reference to the limits of movement of said valve, another set of contacts on the other of said parts being adapted successively to engage said plurality of sets of contacts respectively, and a spark plug located at said burner and connected to a secondary contact of each of said definitely arranged sets whereby to furnish a spark at predetermined intervals during the movement of said valve.

GETS PATENT RIGHTS FOR AUTOMATIC DAMPER FOR STOVES AND WARM AIR HEATERS.

United States patent rights for an automatic damper for stoves and warm air heaters have been obtained under Serial Number 1,272,064 by Max Lezius of Cleveland, Ohio. The following is an explanation of the device:


1,272,064.

A stove or warm air heater pipe having a side draft extension, in combination with separate damper plates pivotally mounted at one side of their diametrical centers within said pipe and said extension respectively on slidable supports, each plate being sensitively balanced for self-action and adapted to open and close more or less completely across the passage-way through the part in which the same is mounted under the influence of up and down drafts through said pipe.

A stove or warm air heater pipe having a main passage and a side opening thereto, a swinging damper having a supporting ring therefor slidably mounted within said side opening to set said damper in various adjusted relations to the said main passage.

A damper device comprising a pair of rings having inturned flanges mechanically united in facial engagement and a damper plate having a journal-pin rotatably confined by channeled bearing portions between said rings.

PUBLISHES ARTISTIC CATALOG.

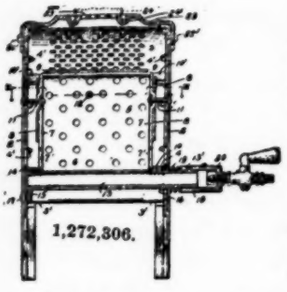
Notwithstanding the old saying that "clothes do not make the man," the average person judges by outward appearances. A great physician in rags makes a poor impression. A banker in overalls finds himself at a disadvantage in the world of business. A poorly printed and badly illustrated catalog gives an unsatisfactory notion of the concern which issues it to every one not actually familiar with the precise character of the company. It is, therefore, an evidence of sound wisdom to employ the best devices of the printer's art in the making of a catalog which is designed to represent the manufacturer to his clientèle.

This appears to have been in the mind of the Fanner Manufacturing Company of Cleveland, Ohio, when preparing the latest edition of its catalog. The pages are of heavy book-plate paper, grayish green with white margins. This color scheme is very effective in bringing out the full value of the half-tone illustrations, which seem to stand out from the pages as things of reality. The stove dealer or manufacturer who wants to purchase supplies from the Fanner Manufacturing Company can get a very accurate idea of the character of the various stove trimmings shown in this catalog by studying the illustrations.

This catalog, which takes the place of all foregoing editions, lists and illustrates a complete line of high grade stove trimmings of neat and attractive designs. For the foundry trade, every style and size of chaplet is shown and for the needs of the casting cleaning room an excellent variety of hard iron stars is included. The catalog has 125 pages and is substantially bound. Copies may be obtained by addressing the Fanner Manufacturing Company, Brookside Park, Cleveland, Ohio.

OBTAINS PATENT FOR A GAS STOVE.

Under serial number 1,272,306, United States patent rights have been granted to Robert T. Parisen of Pittsburgh, Pennsylvania, assignor to Lawson Manufacturing Company of the same city, for a gas stove described as follows:


1,272,306.

A gas stove comprising opposite wall-forming plates, a combustion chamber between and secured to said plates with the combustion chamber adapted to expand and contract, a gas burner for the combustion chamber with the burner comprising a tie for uniting said plates, and resilient means for uniting the burner and plates.

A gas stove comprising opposite wall-forming plates with one of said plates formed with a burner passage, a combustion chamber between and secured to said plates, a burner of greater length than the distance between said wall-forming plates with the burner entered in said plate passage and secured to the opposite wall, and resilient means securing the burner to said passage-formed plate.

A gas stove comprising opposite wall-forming plates, a combustion chamber between and secured to the plates, one of the plates having a burner receiving passage, a burner of greater length than the distance between said wall-forming plates with the burner entered through said passage and secured to the opposite wall-forming plate, the burner having an abutment at the exterior of said passage-formed plate, and a coiled spring embracing the burner intermediate said abutment and the passage-formed plate.

A gas stove comprising opposite wall-forming plates with one of said plates formed with a burner passage, a combustion chamber between and secured to the plates, a burner of greater length than the distance between said plates and adapted to be entered through said passage and be secured to the opposite plate, the burner having a boss at its outer end, and an abutment-forming collar adapted to fit the extremity of the burner and formed with a bayonet slot adapted to embrace the burner lug, and a coiled spring encircling the burner intermediate said collar and said passage-formed plate.

A gas stove comprising opposite upright wall-forming end plates, an intermediate perforated body-forming portion secured to the plates, a laterally closed top member secured to the end plates and providing a cap for the perforated body portion, the top member having a grill-forming perforated top surface shaped to receive a flue pipe and a gas burner within the stove.

Thrift and patriotism are synonymous.

THE WEEK'S HARDWARE RECORD

Of Interest to Manufacturer, Jobber and Retailer

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 44 to 49 inclusive.

CONSUL ADVISES AGAINST NEGLECT OF PREPARATIONS FOR FOREIGN TRADE.

In a supplement to *Commerce Reports*, official publication of the Bureau of Foreign and Domestic Commerce, Washington, D. C., United States Consul Baylor L. Agerton writes from Copenhagen, Denmark, as follows concerning the keeping up of preparations for foreign trade:

The fact that the United States is now in the war and that the normal commerce with the northern neutrals is impossible so long as the war continues causes many American business men to believe that there is nothing they can do to further American interests in such countries until peace comes. So long as the war continues, commerce must of necessity be governed by war measures, but in the meantime American business interests should let no opportunity escape them of keeping up their commercial connections in Denmark and taking on new ones, with the view of being ready to get into the market as soon as peace comes.

It must be borne in mind that the Germans are making strenuous efforts to keep the Danish market for themselves; they are willing, during the war, to export goods to Denmark of which they themselves are greatly in need, just because they do not want the Danish market to escape them. American business must have its connections made in Denmark and be ready to meet the sharpest competition from this source as soon as peace comes.

Denmark stands ready to take considerable quantities of goods, such as typewriters, timesaving office devices, boots and shoes, grain, cottonseed cake, automobiles, bicycles, furniture, paints, varnishes, paper, machinery and tools, hardware, canned goods, dried fruit, cotton and woolen goods, agricultural implements, oils, tobacco, cotton, leather, belting, fertilizers, lumber, stoves, nails, cast-iron pipe, drugs, soap, starch, liquors, and railroad equipment—in fact, almost everything which America can export.

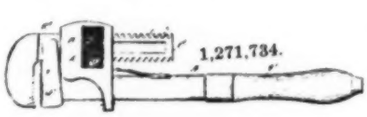
OFFERS GENEROUS PROFITS AND ADDS TO REPUTATION OF DEALER.

Every hardware dealer is, of course, anxious to make large profits on the merchandise which he handles. There are some dealers, however, who allow their desire to reap profits to cause them to neglect other important elements of their business. One of these other important elements is the building up of a reputation. This factor must not be overlooked. Without it success is impossible. A dealer may be able to sell inferior articles at a large rate of profit and get away with this kind of business for a time. But, sooner or later the people who have been fooled into buying the poor grade of merchandise will cause trouble for the dealer. They will tell their friends about the deception, and their influence will mean a direct loss of business to the merchant. His reputation will be lowered socially as well as from a business angle. It is evident, therefore, that the making of large profits is not the only factor in making a success in the hardware field.

One of the ways to build up a reputation is to sell goods which will give such satisfactory service that those who buy the goods will be forced to speak favorably of them, and urge their friends to buy from the same dealer. Hardware merchants who realize the importance of making a reputation for themselves, and the necessity for making profits on their merchandise are advised by the Brown Company, Portland, Maine, to investigate the merits of its Bermico Sheathing Paper. The company states that Bermico offers the dealer generous profits, and helps him to build a "veritable mountain of prestige." An important fact about this sheathing paper is that it will outlast any building on which it is put. It is made of a high grade of material, is attractive in color, does not tear easily, comes in two weights to satisfy various requirements, and is very moderate in price. These advantages which the manufacturers claim for their product are too important to be disregarded. Hardware dealers are advised to write for full information regarding the Bermico Sheathing Paper. This may be obtained by addressing the Brown Company, Portland, Maine.

PROCURES PATENT FOR A WRENCH.

Theodore W. Little of Brookline, Massachusetts, assignor to Walworth Manufacturing Company, Boston, Massachusetts, has procured United States patent rights under serial number 1,271,734 for a wrench described as follows:



In a wrench, the combination with a main shank carrying a jaw, a threaded movable shank carrying a jaw, a housing embracing said shanks and pivoted to the main shank and an adjusting nut engaging the movable shank and mounted in the housing, of a pair of rigid arms on the jaw of the main shank extending well over the movable shank and directly abutting the housing in front of the nut whereby to limit the rocking movement of the housing on its pivot and take up directly the pressure of the nut in operation and prevent lateral rocking or twisting of the housing with respect to the main shank.

By Herbert S. Houston, Member of the Chamber of Commerce of the United States of America on Economic Results of the War.

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CHAPTER XII.

(Continued from last issue.)

There can be little reason to doubt that in the light of knowledge, which friendly discussion would throw upon disputed questions of trade, adjustment and conciliation would often result. This would be meeting the possible trade causes of war in constructive fashion, in a spirit of accommodation, and many of them would be settled. As Edward A. Filene of Boston said before the War Convention of the Chamber of Commerce of the United States, "There is no real reason why nations should spend valuable energy in blocking and hampering each other. There is business enough in the world to satisfy the rightful ambition of all peoples." And he gave this clear challenge of international business, broadening through the centuries into a co-ordinated unity, "Whether we think in terms of the business welfare of our own particular nations alone, or in terms of the general progress and stability of the world, this much is clear: It will not do to leave to traditional diplomacy and to ever-changing cabinets and governments alone the handling of those business difficulties which will menace the successful conduct of international trade and threaten the durable peace of the world."

In order that international business difficulties might not be left to governments alone, through sheer lack of effective means for bringing to bear upon them the collective business judgment of the world, the Chamber of Commerce of the United States has appointed a committee "to make a study of the question of the reconvening of the International Congress of Chambers of Commerce at the earliest time that is judged expedient."

It is not improbable that an international chamber of commerce might become an essential factor in the proposed league of nations. In some countries the chambers of commerce have official status and connection with their respective governments. And whether they had such connection or not they could become a powerful agency for mobilizing good will among the nations, by the accepted give-and-take spirit of business, by developing an established policy of fair dealing, under which trade discriminations would disappear, and by consciously weaving the bands of commerce into bonds of peace.

Such an international organization as part of a league of nations would serve two great purposes—it would constantly work toward the removal of the commercial causes of war, and it would work definitely, if war was impending for political or any other cause, toward the quick and effective use of economic pressure against a nation that refused to take its case for judgment to the World Court. Centuries ago these two purposes were served by a strong commercial organization, that of the Hanseatic League. The trading cities in this League flourished through generations, held together by the common bond of commercial self-interest. They became so powerful that they steadily gained trading rights and privileges, even against the opposition of governments and rulers. And it is interesting to be reminded by the Anglo-American merchant, H. Gordon Selfridge, in his recent book, "The Romance of Business," that a member city that broke the trade laws and rules of the League was punished by having the rights and privileges of the League withdrawn. For example, Bremen in 1356 was expelled from the League, because she failed to punish one of her merchants who had broken a rule of the League in regard to trading with Flanders, and for thirty years she suffered the loss of trade advantages—suffered from economic pressure. At another time Brunswick came under the ban because of delinquency and for six years suffered such great trade loss that her people were brought to poverty. And before the ban was raised two burgomasters and eight important citizens of Brunswick went to Lubeck, the head city of the League, offered abject confession of wrong-doing and craved for pardon in bare feet and on bended knee. And the League used economic pressure not only on one of its members but even against a strong outside nation. So powerful a monarch as Henry IV of England was forced to meet the demands of the League, largely through an embargo by which it closed the Baltic ports to English commerce. While the power of the League waned as the power of nations grew, three of the old Hanse cities, Lubeck, Hamburg and Bremen, were enabled, by the treaty of Westphalia in 1648, to retain certain privileges as "free cities" and these were continued until so recent a time as 1888, when Bismarck finally forced their surrender.

This historical example, although not applicable to the international conditions that will follow the war, at least serves the point of showing how strong the bond of commerce is and how effective economic pressure can be made. An international chamber of commerce, with all the facilities for securing united action now available and with the authority of a league of nations behind it, could be expected to do much toward removing the causes of war, as well as toward making a league of nations so strong in its economic power that wars which threatened could, in many cases, be blocked and wars which started, in other cases, could be stopped; and, if the last ditch was reached, and armed force was required to overcome a recalcitrant nation, such an organization would

greatly strengthen military power by mobilizing, in support of it, the industry and commerce of the law-abiding nations. Against such combined military and economic might, arrayed in defense of international law, any nation would have to strike its colors.

A COURT HOUSE FOR THE WORLD.

CHAPTER XIV.

IN EVERY COUNTRY in the world, if it is so much as half civilized, there is some form of court. And yet the world itself is without one. There is, to be sure, the Permanent Court of Arbitration, agreed to at the Hague Conference of 1899, but that is a piece of judicial machinery, in form, without any force to give it effectiveness. And the utter futility of this Court either to stop or delay war was demonstrated so completely in 1914 that it doesn't seem possible that the world will care to have another demonstration. It is inconceivable that a league of nations should establish a court and permit it to be a mere shadow without any power to give it substance. Too much blood has been shed and debts too stupendous piled up for future generations to pay, to allow a peace conference to decide on a court that would be but a hollow mockery. As a distinguished jurist of the Netherlands, M. Asser, said in the Hague Conference of 1907, in speaking of the Permanent Court of Arbitration, "Instead of a Permanent *Court* the Convention of 1899 gave only the phantom of a court, an impalpable spectre, or, to speak more precisely, it gave a secretarial and a list. And when two Powers having a difference to settle demand that the doors at The Hague be opened to them, the Secretary-General, thanks to the munificence of Mr. Carnegie, can show them a splendid hall, but instead of a court he can only present to them a list on which they may find a large number of persons of a recognized competence, etc."

The Supreme Court of Arbitral Justice, which engaged so much of the attention of the Second Hague Conference in 1907, was not agreed upon, but if it had been, there is small ground to believe that it would have been more than a "phantom of a court," for no provision was made that hearings before it should be enforced. And the World Court, proposed and supported by a considerable group in this country, had the same inherent weakness, which undoubtedly explained its failure to obtain any broad popular endorsement either in the United States or in Europe.

Fully realizing the fatal weakness in these plans for international courts, the League to Enforce Peace made economic and military force the sanction that should compel signatory nations to present their differences for hearing. And from the moment the League was organized in Independence Hall, Philadelphia, on June 17, 1915, it has steadily gained support for its program. The reason is manifest. In a world at war the doctrine was proclaimed that peace when it came could only be maintained if it rested on ultimate force. Instead of beating swords into ploughshares it was proposed, in effect, that they be kept in their scabbards ready to be drawn in defence of law. This seemed strangely like a paraphrase from the Bible in grounding belief in the bringing of peace *with* the sword. It was seen at once that this was not militarism, against which democratic nations have fought, but simply placing effective power behind courts so that they would be respected and used.

Such a sane and practical plan won support from the responsible statesmen of the world—from men charged with the leadership of their nations in the great war. Above the battle smoke they saw arise, courts, envisaging the reign of law, supported and enforced by economic and military power. "The best security for peace," said Mr. Lloyd George in January, 1917, "will be that nations band themselves together to punish the peace-breaker. In the armories of Europe every weapon will be a sword of justice. In the government of men every army will be the constabulary of peace." And M. Ribot in June, 1917, while the Premier of France, said in an address before the Chamber of Deputies, "We echo the noble desire of the President of the United States. Henceforth justice must have as a guarantee the League of Nations which is organizing before our eyes, and which tomorrow will be mistress of the world." Mr. Asquith in an authorized statement in November, 1917, said, "We must aim at something more than the negative functions of policing the world and preventing breaches of the peace; at nothing less than a partnership of the nations in the joint pursuit of a freer and fuller life for the countless millions who, by their efforts and their sacrifices, generation after generation, maintain the progress and enrich the inheritance of humanity. Nor must our reconstruction concern Europe alone. We must aim at setting up a world-wide peace partnership, of which all the civilized communities will be members on a level footing, with equal rights and reciprocal duties."

In the United States ex-President Taft and hundreds of the leading public men of the country and thousands of important journals have supported the League of Nations program. The repeated endorsements from President Wilson have been read in all parts of the world. And it can be safely stated that the President has expressed the sentiment of his countrymen in all of these endorsements, of which the following is typical of many others: "So sincerely do we believe in these things, that I am sure I speak the mind and wish of the people of America, when I say that the United States is willing to become a partner in any feasible association formed in order to realize these objects, and to make them secure against violation.

(To be continued.)

EXHIBITS IN AMERICAN ARTISAN WINDOW DISPLAY CONTEST

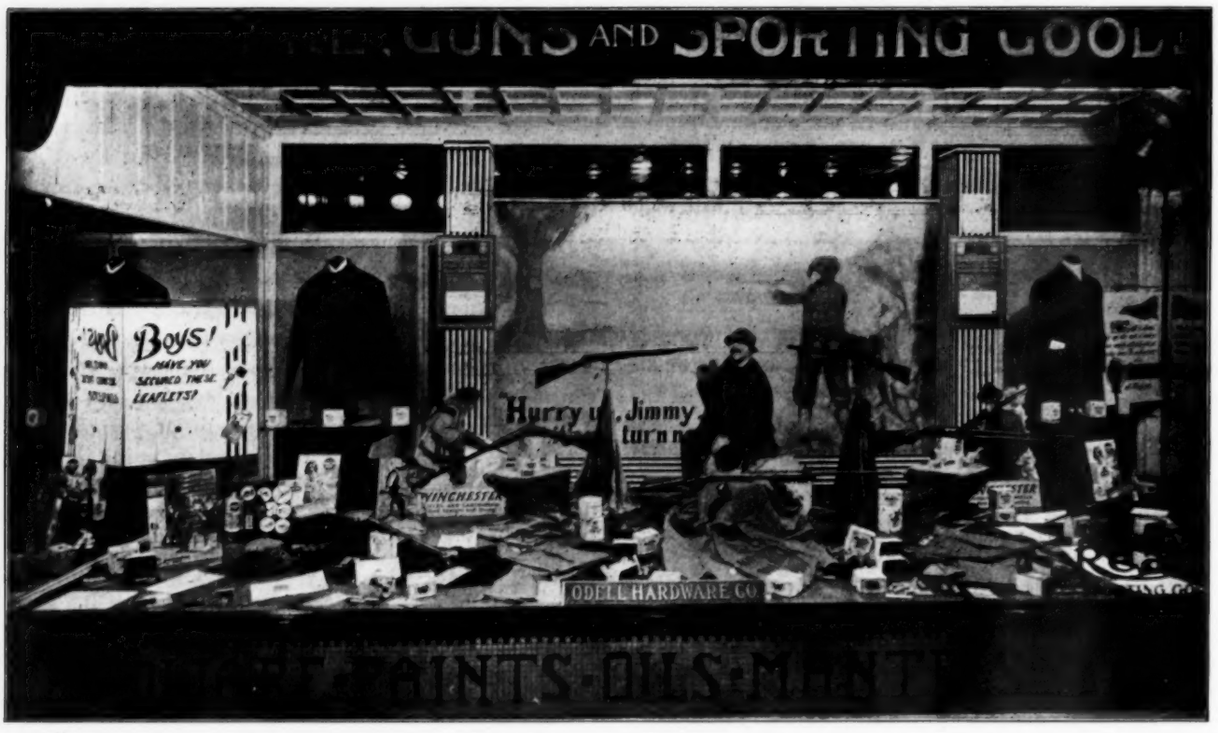
WINDOW DISPLAY OF GUNS ATTRACTS ATTENTION OF MEN AND BOYS.

Very often, in arranging a window display of guns, ammunition, and other hunting supplies, an important class of buyers is completely forgotten. Dealers do not seem to realize what a large amount of business can be conducted through this class. The buyers we refer to are the coming hunters, the young sportsmen, the small sons of the veteran trappers of game. To some it may seem strange to call young boys an important class of purchasers of such articles as are necessary for hunting. However, in considering the matter the idea appears to be a sensible one. We do not mean to say that young boys do go out into the woods in search of game. We speak of them as important buyers because of the effect which they are capable of producing upon the general business of the hunting supplies department.

In the first place, the youngsters love to play with a rifle. Their enthusiasm for this sport is boundless. They stage many miniature trap shooting tournaments. They also play hunting to a considerable extent. This means that the hardware dealer who sells sporting goods can make many sales of rifles by catering to the boys.

Another factor which makes the boys an important class is the effect which their enthusiasm and love for rifles have upon their fathers. Most fathers like to see their children happy and consequently gladly consent to go along with their sons and help select a rifle. When the men have been induced to come along to the hardware store, they notice some articles which they need for their hunting trips. Thus the dealer obtains a generous amount of business through the interest which he has stirred up among the boys of the neighborhood.

Because of its ability to appreciate the fact that a window exhibit of guns and supplies which would appeal to the boys as well as to the men would mean many sales, the company for whom the display shown herewith was arranged did an immense business in this line. This exhibit was arranged by Walter Smith, for the Odell Hardware Company, Queensboro, North Carolina, and was awarded Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. We append herewith a description of the display submitted by the arranger:



Window Display of Guns, Ammunition and Sportsmen's Clothing, Awarded Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD. Arranged by Walter Smith, for the Odell Hardware Company, Greensboro, North Carolina.

"The center panel of this 'Jimmy Gun Display' consisted of two beaver board columns covered in black and white striped paper with a large five by nine foot enlargement of one of the rifle company's advertisements which appeared in one of the most popular magazines in the country. The advertisement gave particulars regarding a rifle contest for boys. The enlargement was made by the writer, in black and white, on beaver board, with a lumberman's crayon.

"Directly in front of the center panel were placed

two rifles on nickeled stands. Nearer to the window were three cutouts supplied by the rifle manufacturers.

"At one end of the background was displayed a sweater, and at the other end a gunning coat. At other places there were clothing, guns, and ammunition.

"Draped from the rifles and over the pedestals in the center was yellow velour, and from the side pedestals and around the outer edge was draped a dark green velour.

"This window display attracted the attention of both men and boys. In fact, the youngsters brought us, directly and indirectly, a large amount of business."

THE RATIO OF STOCK TO TURNOVER DETERMINES RATE OF PROFIT.

Stock reposing on shelves represents quiescent capital. It is as idle as a painted ship on a painted ocean. The longer it remains there the less advantageous it is to the owner. Shelf space has a definite rental value. That value increases with the rapidity with which the contents of the shelves are changed and decreases with the slowness with which the contents give way to new stock. The expense of operating a retail store may be said to consist of two groups of cost—one group of fixed amount, and the other of variable sums. The fixed costs of doing business are those which ordinarily are not capable of reduction to lower figures, such as rent, heat, light, taxes, and wages. The variable costs are those which depend upon the rate of turnover, the energy and intelligence of salesmen, the enthusiasm and efficiency of the owner, and scores of other causes.

No matter how willing and loyal the clerks of a store may be, if they do not sell goods fast enough their willingness and loyalty alone do not bring more dollars into the drawers of the cash register. The merchant himself must devise the ways and means for utilizing these qualities. In other words, he must bring customers into his store by attractive advertising and by sincere and persuasive representation of his commodities before his employes can exercise their salesmanship in moving goods from the shelves into the possession of the customers.

One of the most effectual means for accomplishing this desirable result is the window exhibit—either alone or in conjunction with advertisements in local newspapers. The art and science of window display, however, cannot be acquired without studious effort. In this, as in every other avenue of intellectual endeavor, there is no royal road to knowledge. Fortunately, there are methods of study which reduce the labor of learning. After all, experience is the best teacher. Many valuable lessons of experience are given in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition which is now going on in these columns.

By examining the photographic reproductions of window exhibits submitted in this contest and by carefully reading the descriptions which accompany them, the retailer may learn how to arrange effective window displays for his own store. But in order to do so with the highest success, it will be of great help to him to have the stimulus of competition as an inspiration. Hence, he can best achieve results by taking part in this competition. The rules and regulations under which it is conducted are not burdensome. They have been simplified to an irreducible minimum in order that all may feel free to enter. Our advice to You, whether You be owner or clerk, is to prepare without delay a window exhibit and enter it in this contest. Read carefully the following directions:

Award of Prizes.

The prizes will be awarded as follows:

First prize, $50.00 in cash, for the best photograph and description received of window display of hardware or kindred lines;

Second prize, $25.00 in cash, for the photograph and description second in merit;

Third prize, $15.00 in cash, for the photograph and description third in order of excellence;

Fourth prize, $10.00 in cash, for the photograph and description fourth in degree of worthiness.

Conditions of Competition.

The conditions of the competition are as follows:

The photograph must be accompanied by descriptions of how the window displays were arranged and the materials used. The description is important and hence should be adequate. These photographs and descriptions may be sent by mail or express, charges prepaid, and must reach this office not later than November 1st, 1918. Address al photographs and descriptions to AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition, 620 South Michigan Avenue, Chicago, Illinois.

Each photograph and description must be signed by a fictitious name or device and the same name or device must be put in a sealed envelope containing the real name and address of the contestant. This sealed envelope is to be enclosed with the photograph. Contestants are permitted to enter as many photographs of displays as they please.

A Competition Committee of three will be appointed. One of them will be an expert window dresser and one an experienced hardware man. This Committee will pass upon the merits of all photographs and descriptions received, without knowing the names or addresses of the senders, and will decide the winners of the Competition.

AMERICAN ARTISAN AND HARDWARE RECORD reserves the right to publish all photographs and descriptions submitted.

TELLS HOW TO WIN THE WAR.

The best way of all is to invest, regularly, in War Savings Stamps, for this not only furnishes our Government with money, but, if we invest in sufficient amounts to count, it forces us to practice additional economies after we have met all the other demands upon us. These additional economies are, after all, the important things, for they cut down the civilian demand for materials, transportation and labor, all of which the Government must have in enormous quantities if it is to supply the things needed in war.

RAILROAD ORDER AFFECTS SHIPMENTS OF PRODUCTS CONSIGNED ON GOVERNMENT CONTRACTS.

Manufacturers and dealers in hardware, warm air heaters, and sheet metal products who have contracts with the Government are advised to study carefully General Order Number 38, recently issued by the United States Railroad Administration. Compliance with its provisions will prevent many inconveniences and facilitate the work of shipment. The text of the order is herewith subjoined:

Pursuant to the Act approved March 21, 1918, entitled, "An Act to provide for the operation of transportation systems while under Federal Control, for the just compensation of their owners, and for other purposes," it is ordered that on and after the 15th day of August, 1918, the following requirements and provisions shall apply and be observed in respect to the shipments hereinafter described:

1. Shipments intended for use of any one of the Government Departments, either directly or through a contractor with the United States Government, shall not be entitled to or receive any privilege which may be accorded on account of being intended for use of one of the United States Government Departments, either directly or indirectly through a contractor with the United States Government, where said shipments are consigned otherwise than in one of the following ways:

(*a*) To a Government officer designated, not by the name of the individual, but by the title of his position as for example: Supply Officer, Naval Inspector, or Constructing Quartermaster.

(*b*) To a Government officer designated not by name but by title as above, followed by the words "For account of," and then followed by the name of the contractor or agent for the Government engaged on the work at the point of destination.

(*c*) On some contracts the Government has entered into an agreement designating certain parties as agent, or agents, for the Government on that particular contract. Shipments for such parties shall be consigned to the particular Department for which the work is being done, followed by the words, "For account of," and then followed by the name of the agent as, for instance:

Ordnance Department. For account of duPont Engineering Co. Agent, Penniman, Williamsburg, Va.

Or

Ordnance Department: For account of T. A. Gillespie Loading Co., Agents. South Amboy, N. J.

(*d*) Shipments of material, equipment and supplies for any person repairing or building ships under the supervision of the United States Shipping Board Emergency Fleet Corporation, shall be consigned only to the United States Shipping Board Emergency Fleet Corporation, followed by the words "For account of" and then followed by the name and location of the particular concern performing the work, as for instance:

United States Shipping Board Emergency Fleet Corporation: For account of American International Shipbuilding Corporation, Hog Island, Pa.

2. It is forbidden—

(*a*) In consigning a shipment to use the words, "United States Government" or substantially that term, or abbreviations thereof, as the sole description of the consignee:

(*b*) Or to consign a shipment to and in the name of the United States Government followed by words indicating that it is sent "care of" a private person, firm or corporation:

(*c*) Or to consign a shipment to a Government official or to an officer of the Army or Navy by his name as an individual.

(d) Or to consign a shipment to a Government official or to an officer of the Army or Navy followed by words indicating that it is sent "care of" a private person, firm or corporation.

3. No shipper or other persons seeking or obtaining any privilege which may be accorded on account of the shipment being intended for the use of any one of the United States Government Departments, either directly or indirectly through a contractor with the United States Government, shall without authority, use or cause to be used as consignee the name or title of the United States or of any department, bureau, agency, employe or officer thereof, or of the United States Shipping Board Emergency Fleet Corporation or of any officer, agent, employe thereof, or of any other person, or the designation "Emergency Fleet Corporation;" nor shall any shipper or other person offer or cause to be received for carriage, or transported, without authority, any such shipment consigned as specified in the foregoing paragraphs number 1 and 2, for the purpose of securing, by such consignment, any privilege which may be accorded on account of the shipment being intended for the use of any one of the United States Government Departments, either directly or indirectly through a contractor with the United States Government.

4. Agents are forbidden to sign or issue bills of lading or receipts for shipments which in any manner conflict with any of the foregoing provisions.

W. G. McAdoo,
Director General of Railroads.

(Violation of the foregoing order is punishable by fine of not more than $5,000.00 or by imprisonment for not more than two years or by both such fine and imprisonment.)

EXPECTATION SPURS ENDEAVOR.

You expect the person you hire to do certain work and achieve certain results. If your expectations are reasonable, and this person knows their extent, they serve as a spur to satisfactory performance. If you expect much you will get more than if you expect little. The mental attitude is as contagious as mumps. And the confidence implied by your expectation has a positive compelling power.

"England expects every man to do his duty," was Nelson's message before the battle of Trafalgar. The world knows what happened. And the world knows how different the result might have been if the great admiral had said, "England looks for little this day." Doubt always chills the desire to do well. By the same sign, dependence encourages.

HARDWARE DEALERS INCREASE SALE OF GUNS BY GIVING INSTRUCTIONS AND ADVICE TO CUSTOMERS.

Hardware dealers in selling guns and ammunition have found it to be an exceedingly good policy to read up on the subject as much as possible, not only to understand the merits of the articles which they sell, but also to acquire general information which would be of interest and value to their customers. The buyers like to do business with the dealer who is interested enough in their welfare to offer helpful advice and suggestions. It is, therefore, for the benefit of hardware dealers who desire to increase their sales of guns by knowledge on the subject that we offer the following information. The suggestions contained therein are based on the opinions of those who have had wide experience in this line:

There have been great advances in the kind of sights used on sporting and military rifles, from the old style arquebuse fired at point blank range to the modern high power rifle effective at a mile or more. The old muskets and rifles were minus any sights at all, or at the best a very crude knob on the front end of the barrel served as a front sight. A rear sight was an unnecessary ornament, for the range of the gun was so short that all shooting had to be done at point blank distances. As firearms were improved and better powder was developed, the effective range was increased to such an extent that the crude sights had to be greatly changed and made more accurate.

From the fixed, coarse, round knob of a front sight has been evolved the movable knife blade and bead sight tipped with ivory, gold or other material to assist the eyesight of the shooter. Also, from an entire absence of any rear sight at all, there has been developed through the various stages of a crude open notch cut in a raised place on the breech of the barrel, the present refined movable V notch sight with adjustments for elevation and windage. The rear peep sight is another sight development, but the most refined for long range accurate shooting is the delicate telescopic rifle sight.

Human muscles, nerves and eyesight are not so mechanical in their actions as a finely finished machine, and are more subject to variations and inaccuracies. To overcome this, and to act as an aid to the human senses, are the chief aims of sight-makers. After all, the only purpose of sights is to enable the shooter to point the rifle so that the bullet will hit the target.

However, the differences in the eyesight and nervous and muscular action and reaction of different individuals, which may be called the "human equation," will cause different final results to be obtained from even the most finely adjusted scientific instrument. This is equally true in the use of the rifle, for different persons will get a different grouping or arrangement of bullets about the target when shooting the same rifle under identical conditions. Again, each shooter may have certain peculiar personal characteristics that may result in the majority of his bullets going to one side of the bull's-eye, even though the sights and other mechanical features of the rifle itself be perfectly co-ordinated.

The first difficulty encountered by the marksman lies in the peculiarities of the human eye. The muscles of the eye unconsciously change the distance of the lense from the retina so that the image of whatever is being looked at is automatically focused upon the retina. This gives clear, sharp and distinct images of the object viewed, but other objects in the line of vision or sight that are nearer or farther away from the eye are slightly blurred or fuzzy in outline, because they are out of focus.

For training the eye and accustoming the muscles to focus so that the least blurring occurs, the method called "triangle of sight" is of excellent service. A loosely filled sand bag is placed on top of a tripod, and the whole is adjusted so that when the rifle is laid across the bag and bedded down so as to remain firm, it is at the proper height for aiming from the shoulder without disturbing of moving the rifle. This is set up about thirty feet away from a wall, and a blank sheet of paper is attached to the wall in a line with the sights. Then a small black circular disc with a pin hole through the center is attached to the end of a slim pointer. The sighter takes an aiming position at the tripod without disturbing the rifle, while an assistant moves the disc over the paper on the wall at command until in the opinion of the sighter it is exactly in the line of sight for a bull's-eye shot. A pencil dot is then made on the paper through the center pin hole in the disc. The disc is then moved, and the sighter steps away from the rifle for a few second's rest. The operation is repeated until three points have been made on the paper. Generally these points will coincide fairly closely, but can be connected by lines forming a triangle. The size of the triangle is an indication of the accuracy of the sighting being done, for the larger the triangle, the poorer and more erratic is the sighting. Practice in this manner will train the eye and correct differences due to plain errors in sighting.

In this connection there are three general methods of taking sights with the standard open or V sights, and the marksman should select the one which gives the best results for his particular eyesight. One, called the fine sight, consists in taking just the bare tip or minimum amount of the front sight that can be seen throught the bottom of the notch in the rear sight. In poor light, the amount of the front sight showing above the rear notch must be increased, which results in what would be called a coarse sight in a good light. However, the use of a coarse sight for all types of shooting will result in somewhat erratic sighting on account of there being no mark to show just how much of the front sight shows. The full sight means taking enough of the front sight to fill or come level with the top of the V notch.

The above applies more particularly to the knife blade front sight with no bead on the top, and the plain straight bar rear sight with V notch in the top of the bar. Where a round bead front sight is used, the rear sight notch is usually of the rounded bottom U form, and the methods of sighting are, according to the amount of front bead showing above the bottom of the notch, a fine bead, a coarse or half bead, and full bead.

Whichever method is selected, it should be adhered

to, for a change will cause the hits to be either above or below the bull's-eye.

In correcting the sights of the rifle to suit individual characteristics, a steady support should be secured over which the rifle can be rested. A sand bag makes an excellent rest, and the firing can be done either from a lying or sitting posture, where rests can also be obtained for the body and arms of the shooter. The target should be about fifty yards away, and the same kind of ammunition should be used as is going to be used in future shooting.

Several shots should be fired, each with equal care, and their grouping observed with respect to the bull's-eye. If a majority of the hits are low, the rear sight notch piece should be raised slightly in the sight frame, which can usually be done without changing the rear sight elevating mechanism for firing at longer ranges. If the hits are high, the notch should be lowered. Should the hits be to the right of the bull's-eye, the front sight should be moved slightly to the right, or the rear sight to the left, in its slot in the rifle barrel. Where the group of hits lies to the left of the bull's-eye, the correction should be made by moving the front sight a little to the left, or the rear sight to the right. When there is a considerable side adjustment to make, part of it should be made on the rear sight, and the rest taken up on the front sight.

Barrel sights are nearly always put in from the right-hand side of the rifle barrel, hence if for any reason it is desired to take a sight out of its slot, it should be from the left to the right.

By the firing of a number of groups of shots, with the sight correction made for each group, the shooter will be able to fit the rifle to his peculiar individual characteristics. This will result in much better scores being made at the target range, and a larger number of hits registered on wild game.

There are various kinds and sizes of notches for open rear sights, varying from the wide-angled coarse open V, which is mostly used for quick snap shooting at running game in a wooded country, to the fine notch in a straight bar for target and long-range work. Each is adapted to its particular field and finds many adherents, for every marksman has his own preference for sights that produce the best results under his handling.

The best modern rear sights have adjustments which move the rear sight to either the left or right to make allowances for windage. At short ranges, the effect of a cross wind in blowing the bullet from its course is not important, but at the long ranges it becomes quite an item, and must be taken into consideration. If the wind is from the right, the rear sight must be moved to the right and vice versa. The amount of offset to allow upon the graduated windage scale depends upon the range, the velocity of, and direction of, the wind. This can be determined only by actual practice, and then depends to a large extent upon the judgment of the shooter.

Peep sights are generally placed over the breech or on the tang of the rifle back of the breech. They have a small hole through which the eye looks instead of a notch, and increase very much the field of vision. A bead front sight is of better use with a peep sight than a knife blade. Nearly all of the peep sights are screwed solidly to the rifle, and do not permit of being moved sideways, hence sight corrections either to left or right are made on the front sight. They are, however, equipped for range elevation and for windage adjustment.

The size of the peep hole has a considerable effect on the accuracy of the shooting. A large hole is used for quick nap shooting in hunting, while a very small hole through a large disc is used for fine target work and long-range shooting.

Telescopic sights may be considered as the ultra-refinement of all rifle shooting. They are quite expensive and are only adapted to long-range shooting, or extremely fine work on the target range. For ordinary shooting in the hunting field, telescopic sights are too cumbersome and too slow, for most game shooting is too much of a snapshot nature for the use of these sights.

Nearly any rifle can be fitted with the telescope for fine target work, and the sights removed when the gun is wanted for hunting purposes. The magnification varies from three to five powers in the standard sights on the market, the higher powers being used for long range shooting. The telescope sits high enough above the barrel so as not to interfere with the regular front sight, which is not necessary when using the telescope. Inside the tube are cross hairs or an aperture, whichever is preferable to center on the target. Windage and range adjustments are also provided.

By a proper adjustment of sights to suit the individual characteristics of the shooter and the devotion of some time in conscientious practice, the average rifle owner can develop into the sharpshooter class, which is the goal of all lovers of rifle shooting.

CORRECTS WRONG STATEMENT ABOUT LIMITING SALES OF HARDWARE.

In several quarters rumors have been current about sales of hardware being limited strictly to war needs. One such report stated that nails and other builders' hardware could be sold only for farming purposes. Inquiry regarding such statements elicited the following authoritative information from Washington, D. C.:

July 31, 1918.

To American Artisan and Hardware Record:

Answering your letter of the 24th inst., would say in reference to article in the St. Joseph, Missouri, press dated July 18th, stating that builders' hardware such as nails and similar materials for repairs may be sold only for agricultural purposes, is incorrect. Nails for repairs of any kind are essential and there is no reason why they should not be sold.

Nails for new construction, however, would depend largely upon the character and uses of the new work in question.

Very truly yours,

J. Leonard Replogle,
Director of Steel Supply.
Per Andrew Wheeler,
Chief of Bureau of Warehouse Distribution.

Give up your luxuries that the Kaiser may be made to give up his ambitions.

PATRIOTIC HARDWARE MAN DEVOTES A WINDOW TO SOLDIERS.

An example of patriotic enterprise worthy of wide emulation is furnished by the action of E. Hackley, hardware dealer of Earl Park, Indiana, in establishing an "Honor Window" in his store for those who have joined the fighting ranks of our country. He describes its purpose as follows:

We are giving our west show window to the public as an "Honor Window" to the boys who have and will go to the front. Our plan is as follows:

This window will be decorated with our National and Allied colors for the duration of the war.

We will be glad to receive photographs of our boys, also their camp to be placed in this window, in fact anything which they may send home. When you bring their photos also bring their proper addresses. Their friends will want to write. Any news from home, to a soldier, is good news. The lads will be hungry for a word from home.

"We must not forget," so help me keep this window alive with the news from the front in honor of our soldiers.

ASKS ABOUT OSCILLATOR SPRINKLER.

To American Artisan and Hardware Record:

Can you furnish us with the name of the manufacturer of an 8-foot Baby Campbell Oscillator Sprinkler? Any information you might give us will be greatly appreciated.

Subscriber.

———, Illinois, August 5, 1918.

ISSUES NEW CATALOG OF CUTLERY.

An attractively designed and printed catalog of hand wrought tools and cutlery has just been issued by the Washington Cutlery Company of Watertown, Wisconsin.

COMING CONVENTIONS.

Nebraska Retail Hardware Association, Omaha, February 3, 4, 5 and 6, 1919. Nathan Roberts, secretary, Lincoln, Nebraska.

Missouri Retail Hardware Association, St. Joseph, Missouri, February 4, 5 and 6, 1919. F. X. Becherer, Secretary, St. Louis, Missouri.

Wisconsin Retail Hardware Association, Milwaukee, February 5, 6, 7, 1919. P. J. Jacobs, Secretary, Stevens Point, Wisconsin.

Iowa Retail Hardware Association, Coliseum, Des Moines, February 11, 12, 13 and 14, 1919. A. R. Sale, Secretary, Mason City, Iowa.

Michigan Retail Hardware Association, Kalamazoo, February 11, 12, 13, 14, 1919. Arthur J. Scott, Secretary, Marine City, Michigan.

North Dakota Retail Hardware Association, place to be determined, February 12, 13, 14, 1919. C. N. Barnes, Secretary, Grand Forks, North Dakota.

Illinois Retail Hardware Association, Chicago, Hotel Sherman, February 17, 18, 19 and 20, 1919. Leon D. Nish, secretary, Elgin, Illinois.

Minnesota Retail Hardware Association, St. Paul, February 18, 19, 20, 21, 1919. H. O. Roberts, Secretary, Metropolitan Life Building, Minneapolis, Minnesota.

Good will in merchandising is just what the two words mean. But it is the good will of your customers, and you get it and hold it with good stock and good storekeeping.

OBITUARY.

Louis Schmetzer.

One of the pioneer members of the Hardware Club of Chicago passed away in the person of Louis Schmetzer who died August 7, 1918, at his home in Chicago. He was born January 18, 1878, in Rothenburg, Bavaria, and studied in France and England. While still in his minority he came to America with his parents and settled in Chicago where he entered the hardware trade. At one time he was manager of the Chicago branch of the American Wringer Company. He is survived by his wife, Mrs. Elizabeth Schmetzer, and a son and daughter, Louis and Violet.

OPPORTUNITIES FOR FOREIGN TRADE PRESENTED BY BUREAU OF FOREIGN AND DOMESTIC COMMERCE.

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attachés is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

27249.—An agency is desired by a firm in Denmark for the sale of agricultural machinery, technical instruments, and electro-technical appliances. Quotations should be made f. o. b. New York. The firm has an agent in the United States with whom interested may correspond. The firm will furnish references if desired.

27250.—A man in Spain desires to purchase and secure an agency for the sale of automobile parts and accessories. Correspondence should be in Spanish. References.

27251.—An agricultural syndicate in France desires to purchase cord for binders. Samples should be submitted. Cash will be paid. Correspondence should be in French. References.

27262. A man in Spain desires both to purchase outright and secure an agency for motorcycles and parts, and automobile parts and accessories, especially spark plugs. Terms of payment to be suggested by the exporter. Correspondence may be in English. References.

27264. A man in Norway will consider agencies for ropes and agricultural implements. Correspondence may be in English.

27265. A man in France desires to represent American exporters requiring a traveling representative for all Europe and North Africa. He states no preference for any particular line of goods. Correspondence in French preferred. References.

Retail Hardware Doings.

Kansas.

The Evans Hardware Company at Kinsley is closing out its stock and will discontinue the business.

Missouri.

A. L. Hought has bought the Samuel Stone hardware and implement business at Kingston.

The Crawford and Chandler hardware store at Chitwood was slightly damaged by a recent fire.

Nebraska.

G. M. Smith and Company bought the business of the Hershey Hardware Company at Hershey.

Oregon.

G. W. Kleinschmidt, Chas. F. Kleinschmidt and V. E. Daniels have incorporated the East Oregon Hardware Company at Baker with a capital of $50,000.

South Dakota.

Charles Gamble, Senior, has purchased the hardware business of Martin Quinlan at Bushnell.

C. J. Martin bought a hardware business at Yankton.

Texas.

John Runke has opened a hardware store at Canadian.

AUTOMOBILE ACCESSORIES SOLD BY HARDWARE DEALERS

DENIES FALSE RUMORS.

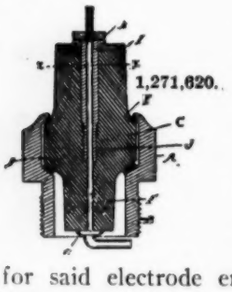
An official statement from the Fuel Administration denies false rumors concerning gasolene and oil, as follows: "The attention of the War Industries Board and of the United States Fuel Administration has been called to the wide prevalance throughout the United States of a mistaken impression that some order or recommendation has been issued from Washington with respect to the sale of oil and gasolene. In some places, local automobile dealers' associations have even issued circulars laying down the rule that dealers in oil and gasolene must make no sale of these products on Sundays and holidays or after 6 p. m. on other days, and stating 'it is now an order from Washington.'

"No such order or recommendation has been issued by any governmental authority or with any governmental approval. The Fuel Administration has urged that wasteful practices in the use of oil and gasolene shall be stopped and all reasonable and proper measures of conservation shall be observed. No limitations, however, have been placed upon the sale of these products.

"It is not intended to interfere in any way with the activities of automobile dealers' associations or others who, after consideration of the local conditions, may seek to bring about some limitation upon the hours during which oil and gasolene shall be sold to the public; but it is desired that it be clearly understood that no orders or recommendations have been issued by any governmental authority upon this subject."

ASSIGNS PATENT FOR SPARK PLUG.

Under serial number 1,271,620, United States patent rights have been granted to Albert Schmidt, Flint, Michigan, assignor to Champion Ignition Company, Flint, Michigan, for a spark plug, described as follows:



In a spark-plug, the combination with an insulator, of an electrode extending therethrough, a metallic sleeve surrounding said electrode and having a different coefficient of expansion, said sleeve having a threaded engagement with the insulator, and clamping means for said electrode engaging the outer end of said sleeve.

THE MUD PAN MUST BE KEPT CLEAN.

One of the most common causes of fire in an automobile is the allowing of an accumulation of dirt in the mud pan. Many autoists do not seem to realize how important it is to keep the mud pan clean. They are careless in this regard until a fire occurs and they are then able to appreciate the necessity for keeping the mud pan free from accumulations of dirt.

Many hardware dealers who sell automobile accessories have found it profitable to give autoists helpful suggestions and advice pertaining to this and other causes of fires. One dealer of our acquaintance has a very effective way of warning the autoists of the danger of allowing dirt to accumulate on the mud pan. He tells them of the experience of one of his customers whose car was badly damaged by a fire due to this cause. The wiring was so injured that the engine could not be operated. A mixture of mud and grease, which had gradually grown from the time the car was purchased, formed a dam just back of the flywheel. A leaking carburetor allowed sufficient fuel to collect so that a backfire, which occurred the next time the engine was started, set it on fire. Autoists should not let their carelessness bring them such an experience. Hardware dealers who sell automobile accessories can win the good will of their customers by giving them advice on this and other subjects of interest and importance to autoists.

"CARLESS DAY" IS PATRIOTIC MOVE.

Some time ago it was pointed out in these columns that the Government had not imposed any very stringent restrictions upon autoists in order to conserve the supply of gasolene so necessary in the prosecution of the war, and especially in the operation of airplanes. It was also stated that such prohibitory measures would most likely not be adopted if the car owners would voluntarily enforce a conservation of the gasolene supply. We are pleased to observe that the autoists are assuming the right attitude in this regard. Various plans have been suggested by the car owners all over the country, and many conservation measures have been voluntarily adopted. One of these we desire to discuss because it is very practical and would work no great hardship on the autoists.

This plan is known as the "carless day" scheme. Automobile clubs all over the country are urging its adoption, and hardware dealers who sell automobile accessories are lending their enthusiastic and active support to the move. The plan requires autoists to forego the use of their cars one or more Sundays during the month, and to invest the money which they save in thrift stamps. In this way the car owners are doing a patriotic act by helping conserve the gasolene supply, and lending their money to the Government, and are benefiting themselves by making a safe and profitable investment instead of wasting their money.

ADVERTISING CRITICISM AND COMMENT

Helpful Hints for the Advertisement Writer

The American people are known all over the world for their love for sports and healthful games. It is due to this characteristic that they are possessed with an indomitable spirit which makes them the bravest and most daring of fighters. In fact, from the reports

from the front it is evident that the Yanks go into a battle as if it were also one of their national sports. When we consider the love of our people for games and sports, it is little wonder that sporting goods constitute one of the most popular and, consequently, profitable lines of merchandise in this country. Hardware dealers who have added this line to their stock have increased their business considerably. For this reason, it is well to devote some advertising space at different times to this line.

The accompanying illustration shows a sporting goods advertisement which is an unusually strong bit of copy. It was prepared by the Sullivan-Markley Hardware Company, and ran in the *Greenville Daily News*, of Greenville, South Carolina. The illustration showing the golf links in the background, and the golfer carrying his clubs, is one which interests the lovers of that sport in this hardware company. Such a suggestion is all that the golfer needs to stir up his enthusiasm. The head, "Sportsmen's Headquarters," is likewise of service in interesting that particular class of trade in the goods sold by the company. The use of the word "you" is forceful in speaking to those who are preparing to go camping. The information that the sporting goods is one of the company's main lines causes the sportsman who reads the advertisement to assume a favorable attitude toward the company.

* * *

Selling an unknown product, one made by a company whose reputation has not been established, is a very difficult matter. This is especially true in the case of larger articles such as stoves. Before a person buys a stove he makes investigations. He tries to find out what types and what makes of stoves are giving the greatest satisfaction. He gets all the information he can about the fuel saving qualities which the different kinds possess. He talks the matter over with his friends. The stove which receives the most favorable recommendations is most likely the one which he decides to buy. It is self-evident that a stove about which his friends know little or nothing will not even gain his consideration. On the other hand, one which is well known and the makers of which have earned for themselves a reputation for honesty and fair dealings can not help but make a favorable impression. The advisability of selling and advertising reliable, standardized, well known stoves, made by honest manufacturers, is, therefore, apparent.

The advertisement of the Reyburn Hardware Company which appeared in the *Leavenworth Times*, and

Use a Clark Jewel Oil Stove
Help conserve the supply of other fuels, such as coal and wood. Oil as a fuel is more plentiful and cheaper than coal and wood
2, 3, 4 Burners
$14.00 to $24.00.
The stove with the short chimney. It puts the heat where you want it directly under the utensil.
Come in and let us show you this splendid stove.
The Reyburn Hardware Co.
PHONE 259
S. E. COR. 5TH AND CHEROKEE STS.

which is shown herewith, offers a good illustration of the effectiveness of preparing copy about a well known make of stove. The right impression is produced from the very beginning of the advertisement. The statement, "Use a Clark Jewel Stove," attracts favorable attention because of the popularity of this make. The illustration showing a woman using the stove carries an appeal to the housewives. It arouses in them a desire to visit the store of the advertisers and find out all about the stove.

HEATING AND VENTILATING

DISCUSSES QUESTION OF UNDERFEED WARM AIR HEATERS.

Inasmuch as most things in business are purely relative, there is always ground for argument for and against any given method or commodity. One of the reasons why industry develops through inventions is because there is room for improvement in every department of mechanics. On page 33, August 3, 1918, issue of AMERICAN ARTISAN AND HARDWARE RECORD appeared a brief note from a subscriber asking for information concerning the good and poor points of underfeed warm air heaters. The following letter from a warm air heater salesman is in response to the request:

TO AMERICAN ARTISAN AND HARDWARE RECORD:

The request for discussion through the columns of your magazine as to the disagreement relative to the advantages of the "Underfeed" principle as applied to the warm air heater, prompts the writer to render his opinion, but along the lines of "more sportsmanlike salesmanship," which has been quite frequently discussed through your magazine, of which it has always been a strong advocate.

These principles of salesmanship have always been employed by the high grade salesman in any line, either commercially or locally. The writer is sure that salesmen who use such principles are much more successful than those who employ the "knocker" system, which he is positive this discussion will bring out.

The manufacturers of the "underfeed" apparatus are perfectly sincere in the principle which they employ in manufacturing this apparatus, and therefore, are entitled to the courtesy which is well told in that old adage, "Every man's religion is entitled to respect even from scoffers."

The man who wishes to enter the field of competition should acquire the knowledge of all the selling features and points of the article he wishes to dispose of and then pass that knowledge along in such a clear and concise manner that his prospective purchaser will forget the other apparatus. Thereby he will gain the customer's confidence and attention to the extent of receiving the order.

In this respect, the writer is quite positive Mr. Lang can gain his information locally very easily, and thereby get the information direct from users who can give it and who are in a better position to give the desired information than the "critic" whom this discussion will bring out.

It is reasonably a sure thing the manufacturer or salesman is not going to recommend the article handled by his competitor to any prospective customer no matter how good the article may be, as the article manufactured, handled or sold is always "better" than that of his competitor.

The writer who formerly represented the manufacturer of an "underfeed" apparatus, but who now is in direct competition, wishes to bring out this one point, that the man can keep so busy selling his own line he hasn't time to "knock" his competitors.

We will find much more often the faulty warm air heating apparatus is due to poor installation, rather than to the manner in which it burns its fuel, either "top feed" or "underfeed."

In the writer's opinion there is room for improvement in both types of apparatus, and a great deal more room for improvement in the installation, as if either is installed properly there will be no complaint to offer in either case of apparatus.

Yours respectfully,

WARM AIR HEATER SALESMAN.

DEFINITELY SOLVES PROBLEM OF GAS LEAKING INTO LIVING ROOMS.

The leakage of gas from within a warm air heater into the casing, and thence into the living apartments sometimes causes people to condemn the entire warm air system of heating. However, any fair minded person knows that such condemnation is unjust as gas leakage occurs only in a poorly constructed and improperly installed heater. The manufacturers of the efficient warm air heaters, especially, feel the injustice of blaming an entire heating system for the faults of a few poorly built heaters. They rightly believe that if the people who consider the gas leakage in a poor warm air heater cause for condemning the entire system would exercise a little judgment, and be fair and reasonable, they would see that the fault is not with the entire system but with the few low grade heaters which unscrupulous manufacturers have put on the market. They would discover that in the properly constructed heaters which, by the way, are in the vast majority, such a thing as a gas leakage is an impossibility.

In the Superior "Evrtite" Warm Air Heater—made by the Utica Heater Company, 218-220 West Kinzie Street, Chicago, Illinois, Home Office, Utica, New York—for example, the problem of gas leakage has been definitely solved. The manufacturers aver that any possibilitiy of the leakage of gas, smoke, or dust is absolutely and forever eliminated. One of the features of this heater which helps make gas leakage impossible is the combustion chamber which is in reality a combustion chamber and a feed door frame combined in one piece. This combustion chamber is built in such a way that the feed doors are fitted directly to this section without the use of any frame. Consequently, there is no joint whatever at this point, and there is no chance for gas to escape.

The radiator is another feature of this heater which

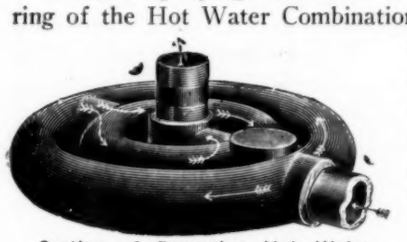
helps prevent a gas leakage. It is of cast iron construction and is made all in one piece, with no joint whatever. It is built by a patented process which assures metal of proper and uniform thickness, heavy enough for tightness and durability, but not of such excessive thicknes as to make radiation of heat slow, and to cause a crushing weight on the rest of the heater.

Dealers and installers may procure full details regarding the Superior "Evrtite" Warm Air Heater by addressing the Utica Heater Company at 218-220 West Kinzie Street, Chicago, Illinois, or at the Home Office, Utica, New York.

AGREES TO REFUND MONEY IF BOILER DOES NOT PROVE SATISFACTORY.

So confident is the Frank D. Stolz Company of the service giving quality of its Champion Hot Water Combination Boiler, shown herewith, that it agrees to refund the money to the buyer if this device does not prove satisfactory. As the company so aptly puts it, "This is a case of everything to gain and nothing to lose for the buyer." Such a guaranty of satisfactory service should not be overlooked by the dealer or installer who wishes to retain the good will of his customers.

The accompanying illustration shows a section or ring of the Hot Water Combination Boiler. One or more of these sections can be used together, according to the amount of radiation to be used. The sections are connected with extra heavy threaded nipples, making all the joints absolutely tight. The fire passing through spaces between rings in each section and over their large surfaces, permits the direct action of the fuel to come in contact with each section added, making a very powerful and effective heater.



Section of Champion Hot Water Combination Boiler, Made by Frank D. Stolz Company, 3129 North Clark Street, Chicago, Illinois.

One of the results which is claimed to accrue from the use of this boiler in connection with a warm air heater is the equal distribution of heat and a healthful balmy atmosphere. Plenty of warmth is provided in every room. Furthermore, the heat supplied is not the dry kind which paves the way for colds and other afflictions due to severe weather. It is pure and healthful heat.

Another advantage of this boiler is that it overcomes the objection existing in many warm air heaters, namely, that the heated air cannot be forced through pipes leading any great distance from the warm air heater. With the use of this boiler the rooms can be heated by the principle of hot water radiation, and an equal distribution of heat throughout the building is obtained. The company has prepared a booklet telling exactly what the cost of the Champion Hot Water Combination Boiler will be for any particular warm air heater. This booklet explains by word and with many illustrations the working principle of this boiler. It may be obtained, together with all other desired information by addressing a request to the Frank D. Stolz Company, 3129 North Clark Street, Chicago, Illinois.

ANNOUNCES GOVERNMENT'S SELECTION OF NOVELTY WARM AIR HEATER FOR HOMES OF SHIPBUILDERS.

When the Government decides to use a certain system of heating in the homes of those who build ships, it is, indeed, a splendid tribute to that particular method of heating. It is also an honor to the manufacturers of a certain type of heater to have their product chosen as the one to be installed in the homes of the shipbuilders. For this reason, it is with a sense of pride and joy that the Abram Cox Stove Company, Philadelphia, Pennsylvania, announces the fact that our Government, through the United States Shipping Board—Emergency Fleet Corporation—has selected its Novelty Warm Air Heater as the type to be installed in all shipbuilders' homes now contracted for in connection with the Hog Island and New York shipbuilding company yards.

In the first place, this is a glorious victory for the entire warm air heating system. For years experts on heating and household efficiency have truthfully emphasized the desirability of warm air heating. They have pointed out that such heat is healthful, since it insures a continuous flow of pure, fresh air. They have also demonstrated that it is economical in fuel consumption when the heater is properly installed, and is of the right capacity for the house. The opponents of this system of heating have vainly attempted to dispute the advantages which, down in their hearts, they knew it possessed over the systems which they advocated. The selection by our Government of the warm air heating system should silence all the empty arguments of the opposition.

In the second place, this selection is a high compliment to the Abram Cox Stove Company, and to its Novelty Warm Air Heater. This action came after a careful investigation by the Emergency Fleet Corporation which sent its own investigators to many of the homes in Philadelphia now equipped with this warm air heater. These investigators asked about the satisfaction the householders are having with this heater. They inquired about its efficiency, economy and durability. The fact that its heater was selected after such a rigid investigation is positive proof, the company maintains, of the high quality of its product.

The Novelty Warm Air Heater is of the "crab" type of construction. Because of this fact the wear is distributed evenly to all parts of the heater, thereby prolonging its life, and reducing the cost of its upkeep. Dealers and installers who desire full information about the various features of this warm air heater, are advised to get in correspondence with the manufacturers, the Abram Cox Stove Company, Philadelphia, Pennsylvania. The company declares that it has been in the business of manufacturing warm air heaters, stoves and ranges for seventy-one years. Dealers and installers, therefore, will no doubt find it an advantage to do business with this concern.

PRACTICAL HELPS FOR THE TINSMITH

VENTILATOR PROPORTIONS.

By O. W. KOTHE.

Replying to the subscriber who wishes to know how to proportion a round ventilator of an ordinary type, the following will give instruction how to do this.

In our drawing A equals the stem of ventilator and should measure 18 inches in diameter. The rest is proportioned to suit the area of stem. In most cases the conditions under which a ventilator must work, largely govern its proportions. For instance, larger spaces are required for dense air, as steam or dust laden air, than are required in the average ventilator. Then, too, the wind in your locality must be considered. For average purposes the openings are proportioned to suit the area of stem. Our stem measures 18 inches in diameter so to find the area, square the radius times $\times \pi$ as $9 \times 9 \times 3.1416$ gives us 254.4696 sq. in. as the area for stem. The length of the lower wind flange is usually made 1/6 of the diameter of stem. At times it must be made larger to prevent the air currents whipping up and cutting off the circulation. Flanges drawn to an angle of 30 degrees suit most purposes. This gives us a length of 3" or 2¾" projections, making the diameter at the edge of flange 23½" and requires a circumference of 73.8286 inches.

Now by dividing 254.4696 ÷ by 73.8286, gives us

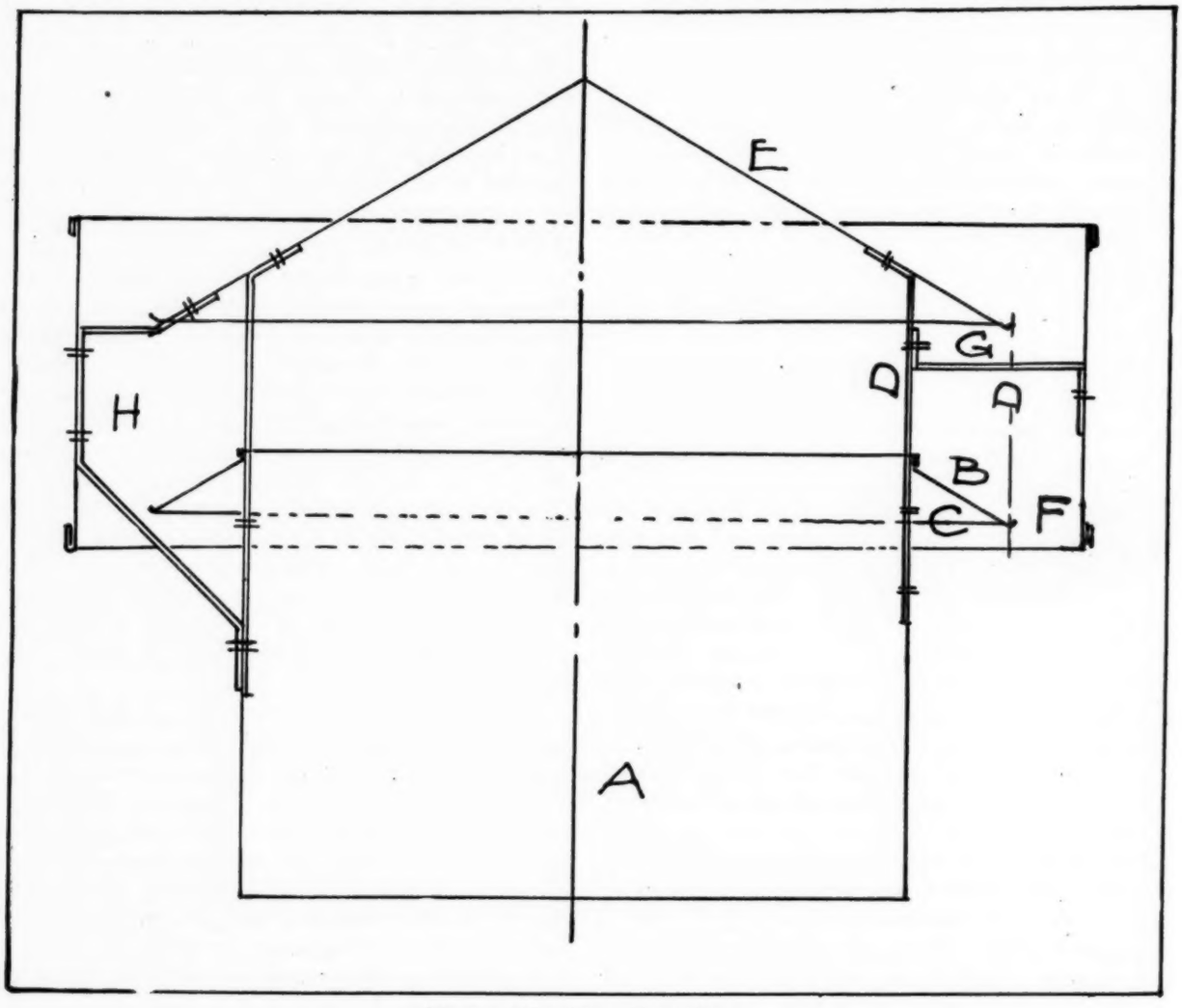


Diagram of Ventilator Proportions.

about 3/119 or say 3¼" rise that the hood must be above the flange. This is sufficient in calm weather where the air can exit equally free or round. But in windy climates this rise must be doubled to permit the air to exit all from one-half of the ventilator. This places the hood 6½" above the highest projection of flange. Ordinarily the hood is raised up, say ¼ or ⅓ or ½ the diameter of stem, which is governed by the ventilating condition.

To find the distance the ring or wind guard must be, the distance from the edge of flange, simply find the area along the edge of the 23½" diameter, as 11¾ or $11.75 \times 11.75 \times 3.1416$ equals 432.1584 sq. in. as the

area for a 23½" circle. Now add the area for stem to this as 432.1584 + 254.4696 equals 686.6280 sq. in. This is the area necessary to permit the area of stem to expand beyond the edges of flanges B.

Next find the diameter this area would make as 686.6280 ÷ 3.1416 gives us 218.56. Extract the square root from this latter number and you have 17.51 plus, or 17½" as radius, giving a diameter of 35" for the ring. Therefore 35 minus 23½ equals 11½" or say 5¼" on one side as projection of ring beyond the flange. Now as air exits at both the top and bottom, so ½ of 5¼ or to play safe, say ⅔ of 5¼ equals 3½" that the ring extends beyond the flange edge or distance F, in drawing. Under ordinary conditions this distance F, can be accepted as 1/9 the diameter of stem.

It should be remembered that to raise the hood, say ⅓ or ½ the diameter of stem above flange will necessitate making the flanges longer; also extending the ring to a greater distance to take care of the required space. The height of ring is governed so no rain or dust will blow in either at the top or bottom. This is ordinarily determined by placing a straight edge along the three points as top of ring, edge of hood, and top of stem. The matter of bracing a ventilator is largely governed by the size. On small work, a brace made as at G, is very serviceable, while for heavier work, it may be made as at H. The pitch of hood E, can be made any desired inclination, but 30 degrees makes a good appearance. The distance B, represents the height the hood is placed above the stem or flange, and C, is a projection of flange. Each workman must study the conditions in his vicinity, and note what proportions suit climatic conditions the best.

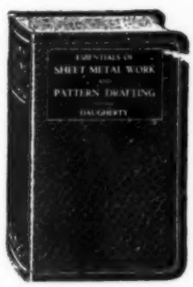
TIN IMPORTS BREAK ALL RECORDS.

Statistics just compiled by the Bureau of Foreign and Domestic Commerce show that the fiscal year ending June 30 last, was a record one so far as our imports of tin are concerned. The total imports of metallic tin were 69,731 long tons as compared with 67,529 tons in the fiscal year 1916—the previous high-record year and 44,722 long tons in the fiscal year 1914—the last pre-war year. Interesting to note is the fact that while in 1914 our importations of tin from the United Kingdom and from the Straits Settlements formed 90 per cent of the total, in 1918 they amounted to only 55 per cent of the total. The loss was compensated for by heavier shipments from Bolivia, China, Australia, and the Dutch East Indies.

The growth of our infant tin-smelting industry is shown by the fact that approximately 13 per cent of our 1918 imports came to us in the form of ores, mostly from Bolivia. A comparison of the figures for the last six months of the fiscal year, as compared with the first six months, shows a surprising decrease in shipments from the United Kingdom and the Dutch East Indies, with increases from the Straits Settlements, Hongkong, China, South America, and Australia. This shift is reflected in the June figures which show the United Kingdom in third place with the Straits Settlements and Hongkong leading in the order named, and Bolivia in fourth place.

IS CLEAR AND EASY TO UNDERSTAND.

Following the best shop methods derived from years of experience both in teaching the subject and as a practical sheet metal worker, Professor James S. Daugherty has produced a book of uncommon excellence in his "Essentials of Sheet Metal Work and Pattern Drafting." It is intended as an elementary and advanced course for vocational and trade school students and apprentices, as well as for sheet metal workers, contractors, and instructors. The author is instructor in sheet metal work at the School of Applied Industries, Carnegie Institute of Technology, Pittsburgh, Pennsylvania, and has a reputation for skill as a practical teacher.



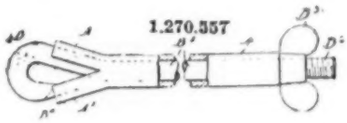
Essentials of Sheet Metal Work and Pattern Drafting, by Professor James S. Daugherty.

Some notion of the subjects treated in this book may be gained from the table of contents which lists the following topics: Transferring patterns to metal; cutting patterns and templates; folding edges and seaming; forming, grooving, beading, and crimping; soldering; double hemmed edges; wiring process; notching and burning; double seaming, peening, and raising; radial line developments; pitched covers and flaring articles; parallel line development; pipe intersections and tee joints; elbows; and return and face miters.

The book is fully illustrated. It contains sketches drawn to scale and clear and complete descriptions of tools, machines, and methods for the making of various articles in the schools. It is purely an educational, not an advertising work, although the Peck, Stow and Wilcox Company, makers of sheet metal workers' tools and machinery are chiefly responsible for its publication. "Essentials of Sheet Metal Work and Pattern Drafting" is for sale by AMERICAN ARTISAN AND HARDWARE RECORD, 620 South Michigan avenue, Chicago, Illinois, and will be sent, postage paid, upon receipt of $1.50, the net price.

PATENTS A SAFETY BULL-LEADER.

Charles Schoettle, Phillips, Wisconsin, assignor to Friedley-Voshardt Company, Chicago, Illinois, has been granted United States patent rights, under number 1,270,557, for a safety bull-leader described herewith:



A device for the purpose indicated comprising a tube, a hook having a shank which extends slidably through said tube, the end of the tube being split to form a guard for closing the opening of the hook, and the inner edge of such guard being approximately alined with the axis of the tube, and locking means at the other end of the shank for securing the hook against sliding in the tube.

Back up those who are offering their all—buy War Savings Stamps.

TELLS ABOUT NEW USES FOR ZINC.

At the recent meeting in St. Louis, Missouri, of the American Zinc Institute an instructive address was delivered by A. P. Cobb on "New Uses for Zinc." He reviewed the changes which have taken place in the industry during the past few years, especially with regard to the increase in production which, owing to war demands, rose from 346,000 tons in 1914 to 667,000 tons in 1916 and 668,000 tons in 1918. He pointed out that the anticipated increase in consumption has not materialized, with the result that there has been a large overproduction with consequent low prices, and said that with the world's productive capacity greatly in excess of the pre-war capacity either the productive capacity must be curtailed or the consumptive demand greatly increased. The latter course, he wisely says, is the one to which we should devote our best efforts, and in the following paragraphs he has outlined some of the uses for which zinc could be advantageously employed:

Look around you everywhere—how many uses are there for metal and in how many of them could zinc be substituted with profit to the users? Because an article has always been made of brass, or copper, or iron, or steel, or tin, or aluminum is no good reason why it should continue to be so made. Zinc can be made to take the place of one or other of these metals in countless instances. In some cases, the first cost to the user will be less and in others, the life of the article so much lengthened that the ultimate cost will be materially reduced.

"In Europe zinc has been largely used for roofing purposes because of its permanence. The practice, however, has never found favor in this country possibly because we have never gone after the business. For this purpose, zinc is as permanent as copper and the cost of zinc sheets over a period of years has been only one-half that of copper sheets; the cost of application being the same in either case, therefore, why should not zinc be more extensively used for this purpose? If we should realize the possibilities of the use of zinc in sheet form for roofing, gutters, leaders and flashing rather than for galvanizing these articles, where but a small percentage of the material used is furnished by us, the consumption of zinc could be very largely increased. By proper education of the public, we should be able to develop this field.

"The present shortage of steel has necessitated manufacturers turning to other metals in order that they may be able to produce their manufactured articles during these war times and the present emergencies should be turned to our permanent advantage and profit. The refrigerator manufacturers are turning to zinc sheets, and it is well known that zinc makes not only a much more sanitary lining for a refrigerator than galvanized iron but a more durable one and so in the long run a less expensive one. Some of the states are considering the use of zinc for automobile license plates. This is a field which could be materially extended at least so long as the scarcity of steel continues.

"Zinc for numerous small articles, such as shoe and corset eyelets, lace tips, shoe clips and metal buttons, is in every way as satisfactory as brass and materially less expensive. The enameling of zinc seems to offer no insurmountable difficulty for there is good reason to believe that it can be as beautifully and durably finished as other metals.

"Cornices, ceilings and other fancy sheet work heretofore made of copper and steel could as readily be made of zinc with the same advantage as to cost as in the case of roofing.

"Builders' hardware, lighting fixtures, ornamental work, such as grills, etc., are all entirely feasible.

"Trench mirrors of polished zinc are war-time articles. If zinc can be polished in time of war why not polish it in time of peace?—and turn the article so made to some advantage. Reflectors for automobile lamps, search lights, etc., are suggestions along this line.

"Nickeloid, or nickel-flashed zinc, has been extensively used in Germany in the manufacture of trays, ash receivers and various forms of knicknacks. This is another field which offers large possibilities for the use of zinc.

"Telephone and telegraph wires made by twisting two strands together helically—one of iron or steel to give it tensile strength and one of zinc to give it conductivity—may be used to supplant copper wire.

"Zinc of certain physical characteristics can be spun for ornamentation and fixture work. Zinc castings and alloy castings containing zinc are all subjects that have heretofore had little attention in this age of the automobile and tractor. This field could be made to require an enormous tonnage of zinc. How many of the parts of the present internal combustion engine, that are now made of cast iron or of aluminum, could be made from an alloy, say, of zinc and aluminum? The possibilities in this field are tremendous.

"If zinc is to be manufactured in increasing quantities, uses must be found for its by-products, one of the most important of which is sulphuric acid. The enormous tonnage of this chemical which is now being used in the manufacture of munitions must be diverted ultimately to some peaceful purpose and, in this, the zinc smelter must have the co-operation of the chemical manufacturer who is not dependent upon zinc ore for his raw material. The manufacture of fertilizer is the most important field for the extension of the use of sulphuric acid in times of peace. Our farms must for years be made to produce their maximum crops if the storehouses of the world are again to be able to take care of the demands upon them. Not only must the devastated fields of Europe be again made productive but the enormous areas of untilled land of our western and southern states fertilized and cultivated to meet the demands for food of our rapidly increasing population.

"Sulphuric acid is probably required in more important industries than any other chemical. It will take our united efforts, however, to keep the consumption in all these industries up to their maximum and at the same time develop new uses.

"Zinc dust, which was formerly almost entirely imported from Europe, is now made here in large quantities; the quality being superior to that previously available. Our new dye industry, the cyaniding proc-

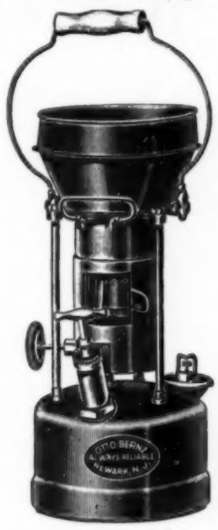
ess of gold extraction and dry galvanizing or Sherardizing being the most important users. No longer must Europe control this field. Our product, now established, must be permanent and no stone left unturned to extend its use.

"I have tried to indicate some of the many possibilities for new uses of zinc which are all around us, at present largely unrecognized. To market our present capacity and develop a still larger growth of the industry, we must have faith in our product, be constantly on the lookout for new uses to which it can be put and, above all, educate the consuming public to the importance of zinc to their daily life and the commerce of the world. This last I consider of paramount importance and one of the most effective channels through which the Institute, if organized, can benefit the industry. Development of processes through research work must be undertaken, at least for the present, by the larger corporations possessing equipment and organization to carry on such work. It matters little by whom the outlet is made provided it drains the territory that is flooded. All within the territory will be benefited. May the time soon come when our product, now largely used in warfare, shall become a recognized necessity in the building and beautifying of peaceful homes and an important contribution to the comfort and convenience of all mankind."

DOES MUCH EXPERIMENTING IN ORDER TO OBTAIN THE MOST PRACTICAL IMPROVEMENTS.

There are some manufacturers who put out their products, and never think of improving them, no matter how long they remain on the market. Such manufacturers notice a continual decrease in the demand for their articles. If they are not willing to keep up with the times and attempt to meet new and ever changing requirements with old and constantly the same products, they should not expect to do business on a large scale. Making improvements requires a great deal of experimental and research work, and this means the expenditure of large sums of money. Perhaps it is for this reason that some manufacturers fail to improve their products. In the long run, however, it pays to invest money in experimenting, for by doing this it is possible to make practical improvements and by making improvements it is possible to insure lasting success for the products.

One manufacturer who believes firmly in the advisability of spending money for experimental work in order to keep his products up to date is Otto Bernz of Newark, New Jersey. This manufacturer declares that since 1876 his concern has spent large sums for experimenting, as a consequence of which it controls many patents covering improvements of a most practical nature. Those who use the products made by this company, therefore, receive the benefits of those improvements. The company includes among its customers at the present time our Government and the Allies. Its plant is, therefore, quite congested, and those who desire any of its products are advised to place their orders with their jobbers immediately so as to allow him plenty of time to obtain the goods.



B Kerosene Furnace, Made by Otto Bernz, Newark, New Jersey.

In the accompanying illustration is shown the B Kerosene Furnace, made by Otto Bernz. It is a most practical device. It is fitted with the company's patented "Snail" burner which gives a blue, clear flame, and is free both from odor and smoke. This burner can be cleaned without taking the furnace apart simply by removing the snail with a wrench furnished with the furnace, knocking off the carbon, and inserting the snail again when the furnace is ready for use. This furnace is also fitted with the company's "Never Leak" pump and funnel, and the "Dust Proof" cap.

The reservoir of the furnace is made of seamless drawn steel, and all the joints are welded by the oxy-acetylene process, which produces the strongest possible joint. A ring is attached to the bottom of the reservoir, which keeps the bottom weld from wearing off, and thus prevents a leakage.

This kerosene furnace is claimed to be very cheaply operated and not dangerous, as kerosene can be carried with little fear of its being ignited, and can be purchased anywhere. Those who are interested in a product of this nature and desire particulars should get in touch with Otto Bernz, Newark, New Jersey.

NOTES AND QUERIES.

Steinfeld Glass Canister Wall Coffee Mill.

From Reiche Brothers, Naperville, Illinois.

Kindly inform me who makes the Steinfeld Trade Mark Glass Canister Wall Coffee Mill.

Ans.—Steinfeld Brothers, 116 West 32nd Street, New York City, New York.

Imperial Washing Machines.

From Fairbanks, Morse & Company, St. Paul, Minnesota.

Kindly give me the address of the manufacturer of the Imperial Washing Machine.

Ans.—Imperial Manufacturing Company, Sand Springs, Oklahoma.

Address of Smith System Heating Company.

From M. F. Quinn, Bloomington, Illinois.

Kindly give me the address of the Smith System Heating Company.

Ans.—Minneapolis, Minnesota.

Mixed Iron.

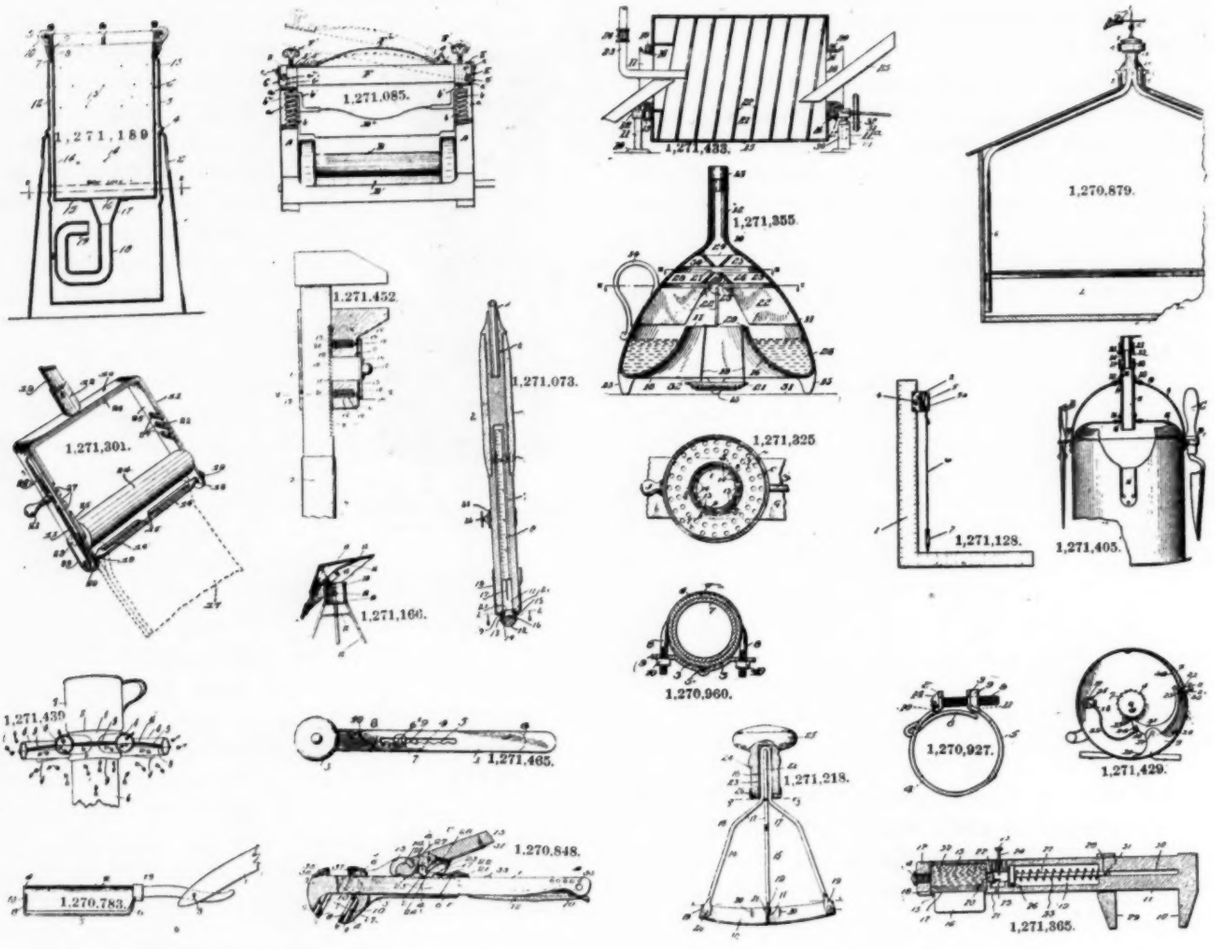
From W. C. Pritchard, Du Bois, Nebraska.

Where can I dispose of a carload or two of good country mixed iron, cast, wrought and malleable.

Ans.—L. Lieberman Iron Company, 110 South Dearborn Street; William Nathan and Company, 3764 South Halsted Street; E. Popper Iron Company, 3622 South Western Avenue, and Jacob Williams' Sons, 1855 South Canal Street, all of Chicago.

You don't take money out of circulation when you lend it to the Government. Uncle Sam spends most of it right here in America.

NEW PATENTS.



1,270,783. Safety-Razor. Oscar Cartlidge, Gillespie, Ill. Filed Oct. 15, 1915.

1,270,848. Wrench. William T. Long, Auburn, Wash. Filed Oct. 4, 1917.

1,270,879. Barn-Ventilator. John G. Shodron, Milwaukee, Wis., assignor to James Manufacturing Company, Fort Atkinson, Wis., a Corporation of Wisconsin. Filed Sept. 13, 1913.

1,270,927. Hose-Clamp. John R. Clancy, Syracuse, N. Y. Filed March 11, 1916.

1,270,960. Hose-Clamp. Sidney J. Linton, Groveland, N. Y. Filed March 26, 1918.

1,271,073. Fishing-Rod. Milton Kuran Patten, Torrington, Conn. Filed April 19, 1918.

1,271,085. Clothes-Wringer. Paul H. Schendler, Erie, Pa. Filed Jan. 4, 1918.

1,271,128. Plumb and Level Gage. Charles Brizendine, Stockton, Cal. Filed Aug. 20, 1917.

1,271,166. Chimney-Cap. Louis Percival Hutton, Orlando, Fla. Filed Jan. 2, 1917.

1,271,189. Washboiler. James W. McFarland, Brownwood, Tex. Filed Feb. 20, 1918.

1,271,218. Fruit Slicer and Corer. Alfred H. Powell, American Fork, Utah. Filed Aug. 20, 1917.

1,271,301. Mop and Wringer. Harry L. Feasel, New York, N. Y., assignor to O-So-Ezy Mop Company, a Corporation of Michigan. Filed July 13, 1915.

1,271,325. Kerosene-Burner. John H. Kinealy, Ferguson, Mo. Filed Sept. 30, 1916.

1,271,355. Insect-Trap. Kaiser Olejniczak, Buffalo, N. Y. Filed Feb. 12, 1917.

1,271,365. Wrench. Albert Worth Reynolds, Jr., Princeton, W. Va. Filed Sept. 12, 1917.

1,271,405. Watering-Pot. Alice Emily Wilt, Philadelphia, Pa. Filed Oct. 16, 1917.

1,271,429. Fishing-Reel. James H. Burt, Kokomo, Ind., assignor of one-half to Charles H. Leer, Kokomo, Ind. Filed Sept. 26, 1917.

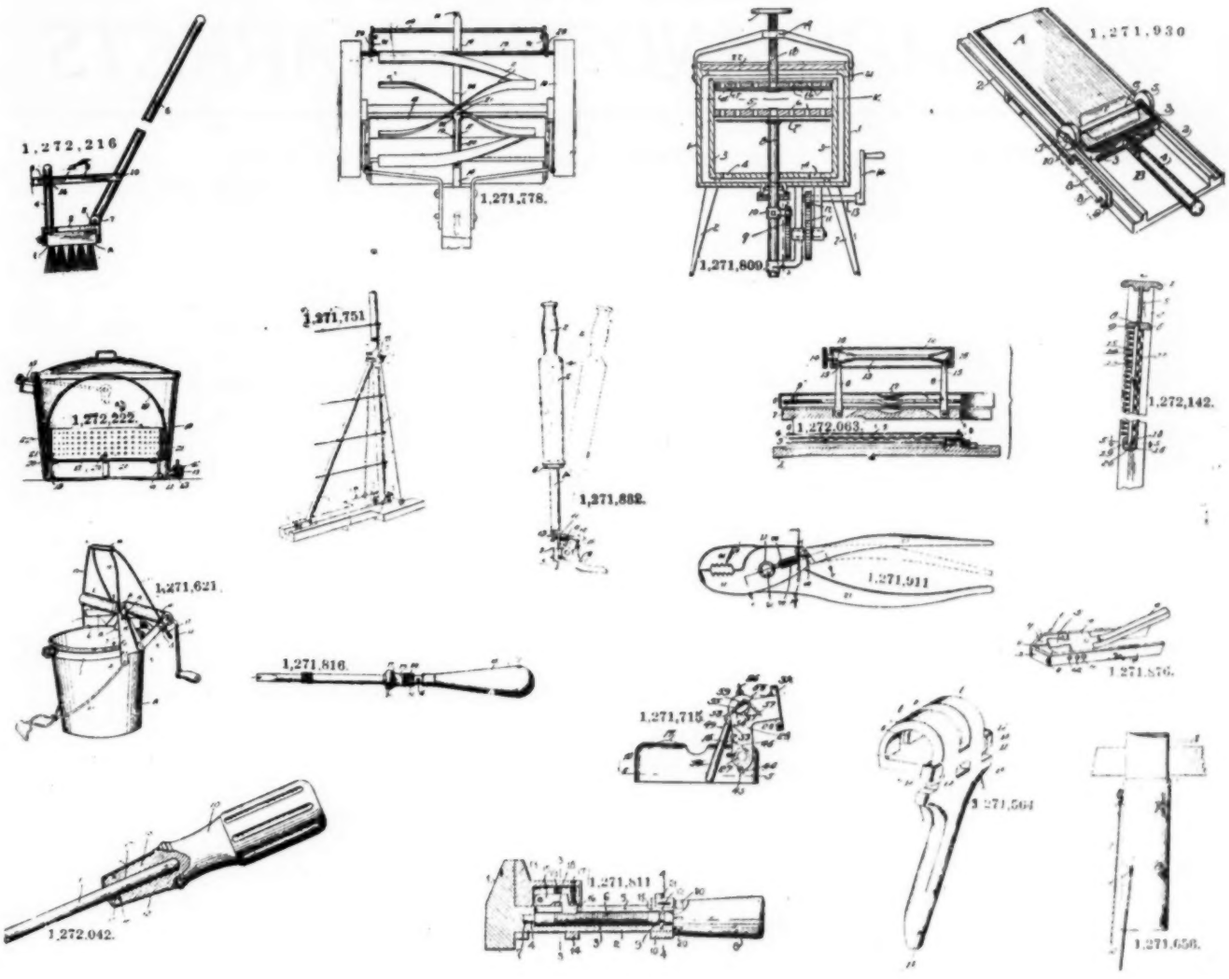
1,271,433. Washing-Machine. Elmer F. Cass, New York, N. Y. Filed Feb. 28, 1914.

1,271,439. Lamp-Heater. Powel Crosley, Jr., Cincinnati, Ohio. Filed Aug. 26, 1916.

1,271,452. Monkey-Wrench. Leo R. Dunn, Farmer, S. D. Filed Mar. 8, 1918.

1,271,465. Can-Opener. Claude D. Hayden, Curtis, Nebr. Filed June 5, 1917.

NEW PATENTS.



1,271,564. Wire-Stretcher. Harry L. Gordon, Chicago, Ill. Filed Dec. 8, 1914.

1,271,621. Mop-Wringer. Jakob Schmoliner, Detroit, Mich. Filed March 9, 1917.

1,271,656. Flue-Cleaner. Thomas Elsworth Blauvelt and John Jackson Fooshee, Hurley, N. Mex. Filed March 22, 1917.

1,271,715. Razor-Blade-Sharpening Machine. Samuel Kanner, Bronx, N. Y., assignor to The Royal Stropper Co., Inc., New York, N. Y., a corporation of New York. Filed Aug. 16, 1917.

1,271,751. Fence-Post. Frank Novess, Ypsilanti, Mich. Filed Aug. 22, 1917.

1,271,778. Lawn-Mower Sharpener. Charles S. Sayre, Albion, Wis. Filed March 10, 1916.

1,271,809. Washing-Machine. Harvey S. Totten, Port Angeles, Wash. Filed May 1, 1917.

1,271,811. Wrench. Charley Vincent and Alfred Fontaine, New Haven, Conn. Filed Aug. 15, 1917.

1,271,816. Screw-Driver. Frederick H. White, New York, N. Y. Filed Jan. 27, 1917.

1,271,832. Nail-Puller. Henry Bartels, Coleman, Wis. Filed Apr. 19, 1918.

1,271,876. Pipe-Clamp. Ivan B. Fairbanks, Emmett, Kans. Filed Dec. 3, 1917.

1,271,953. Blade-Sharpener. Alphonse Newhouse, San Francisco, Cal. Filed June 17, 1916.

1,272,042. Self-Fastening Ferrule for Tool-Handles. Willis F. Hobbs, Bridgeport, Conn. Filed Jan. 28, 1918.

1,272,063. Electric Iron. Moses Levinson, New York, N. Y. Filed Nov. 2, 1917.

1,272,142. Washboard. Jacob A. Sudderth, Buford, Ga. Filed Sept. 20, 1917.

1,272,216. Scrubbing-Brush. Joseph Check, Wilkes-Barre, Pa. Filed Oct. 22, 1917.

1,272,222. Cooking Vessel. Charlotte E. Clayton, Forestton, Minn. Filed Feb. 17, 1917.

WEEKLY REPORT OF TRADE AND THE MARKETS

THE PROBABILITIES ARE THAT WAR BOARD WILL COMMANDEER ALL SUPPLIES OF STEEL.

Many indications point to the probability that the War Industries Board will commandeer all supplies of steel held by industries classed as non-essential. Hardships will be worked by this action, but the needs of the country in the war are paramount in the opinion of the War Board, and while it will endeavor to soften the blow, it seems certain that it must inevitably fall. The row which characterized the conference with automobile manufacturers in Washington is typical of what is to be expected. Threats of political reprisals, said to have been utttered at the conference, have been denied, but it was contended that the threatened action was tantamount to the appointment of a receiver for the automobile industry. The board was sympathetic but powerless in the face of the demands made upon it by the various war agencies.

The aggressiveness of Charles M. Schwab in pushing the demands of the shipbuilding corporation has inspired other departments to take a similar attitude, and the War Board is therefore under fire from both sides. The canvass of the estimates which were called for after the totals had been scanned resulted in an increase in the combined estimates of needs instead of an expected decrease. A survey of the steel supply is now in progress. This survey will embrace all sources of steel supply, and will cover the stores of all plants whether war or non-essentials. The action of the distribution committee of the steel trade in ordering excess steel on the yards of certain war plants removed to plants more urgently in need of it indicates the policy that will be followed in the future.

The acceptance of the situation by the exporters' conference held in New York last week was characteristic of the attitude of steel men in general. These men are suffering great loss, and are seeing their business go to foreign competitors, but they refused to interfere in an effort to improve their personal situation, although they were able to see the inequities complained of. The situation in the Allied countries is somewhat different. Japan is feeling the effect of the shortage of steel in this country, but in England the supply is sufficient to meet war needs and leave some over. England supplied our forces in France with a large tonnage urgently needed at the time, and the Washington government is under obligation to see that this tonnage is returned in advance of supplying our own "non-essentials." Complaints are made that English steel merchants are selling non-essentials in this country at high prices, but the trade regards this as one of the fortunes of war. England is meeting her own war needs from her own steel, and we are expected to do the same. If any is left over on either side the surplus becomes available for ordinary trade, and complaints as to the use made of it are not considered in order.

STEEL.

War requirements are on the increase, and the distribution of steel is becoming more difficult instead of easier. It will be remembered that last April the war requirements were estimated at 16,000,000 tons, whereas today the indications are that 20,000,000 tons will be needed for the present half year. While the schedule making up the 20,000,000 tons is not specific down to the last details it is of a nature to impress steel makers with its importance, and in the past month the requirements have tended to grow in various respects.

The outlook is that there will have to be further curtailment in supplies of steel to some of the finishing departments. The departments most restricted at present are the merchant mills, wire rod mills and sheet mills, these receiving an average of about 60 per cent of the steel that would be required to operate at capacity. The pipe mills appear to have received somewhat more steel than 60 per cent. It is probably among these four finishing branches that the places will have to be found for further restriction if this proves necessary, but there is no light as to which branch or branches would be selected. They can all present more or less cogent arguments why their steel supply should be increased rather than decreased.

COPPER.

Producing interests, expecting higher prices to prevail after August 15th, have been unwilling to accept contracts for shipment after the middle of August, except at the price prevailing at the time of shipment. It is the contention of the producers that they are justified in asking for a further advance of 1 cent to 1½ cents per pound, as the higher price allowed on July 2nd failed to meet the increased cost of production due to various causes but especially to the fact that the advance in freight rates from western smelters to eastern refineries has averaged 75 per cent instead of 25 per cent. They also believe themselves entitled to some compensation for exploration work which must now be undertaken to meet the increasing demands for war.

The war has tended to attract public attention to the vital importance of the copper producing industry. It also is clearing up the suspicion that the industry is or has been controlled by a trust. Gradually the fact is coming to be recognized that each copper producer has been striving individually, or as a corporation, to get out his product at the lowest possible cost, realizing at all times that he must sell it at whatever price the

market offers. Theorists may endeavor to make the public believe that this method of supplying the world with a vitally important commodity is fraught with much danger; but the results have shown that a steadily increasing volume of demand has been taken care of and that the "coming copper famine" so frequently predicted has been avoided.

TIN.

The trade has been taking quite seriously the rumors that the British and American Governments are considering the fixing of a price on tin, and but for the heavy daily advances last week in the foreign market, there would have been considerable nervousness and probably sharp decline in the prices at which tin spot and enroute has been held. But the foreign advances have kept these prices barely steady. A decline in the foreign market would change things, for the reason that it would be taken as indicative of approaching fixed prices.

Open orders for Straits cabled to London continue unfilled, and the whole Straits situation continues in great doubt and uncertainty. Even if up to the present no control is being exerted as regards prices in the East, still it is quite evident a close control is being kept on the amount of Straits tin they are allowed to sell and the buyers who are allowed to get it.

It has been suggested that the reason is that perhaps on request from our Government, it is for the protection of our tin plate mills, who only use Straits tin, or that our Government is itself a buyer to provide tin for their war contracts. It is known that parties having war contracts have been in some cases getting the metal from the Government and in some recent cases requiring tin in the future, have been told the Government would supply them at the proper time.

SOLDER.

The Chicago market has undergone a decrease in prices for the various grades of solder, the present figures being as follows: Warranted 50-50, per pound 57 cents; Commercial 45-55, per pound 52¼ cents; Plumbers', per pound 47¼ cents.

LEAD.

News from the St. Louis lead market is to the effect that prices remain unchanged at 7.75 cents. There are complaints by some consumers that they are unable to obtain sufficient lead for their requirements but everything considered, consumers are doing pretty well. It is difficult to find any producer who is in a position to accept orders for prompt shipment, but they are taking on business every day for September and October shipments. The producers are trying to distribute their supplies in accordance with the importance of their customer's necessities.

SPELTER.

Spelter is quoted in St. Louis as steady at 8.07½ cents. The Joplin zinc ore market is reported as being easy at $40 to $45 for second grade zinc ore which is a decline of $5 a ton as compared with a week ago, and a decline of $10 in two weeks. This is undoubtedly the result of the reaction in the price of spelter but as $5 a ton on ore is equal to more than ½ cent per pound on spelter it can be seen that ore has declined to a greater extent than the metal. At $42.50 for ore the price is only $5 a ton above the low price in April, whereas spelter is 1⅝ cents higher than it was then.

The Government's inquiry for Grade C spelter, on which prices had to be submitted on Friday, August 9th, may have had something to do with the improvement in the market. The consuming demand, however, is better and some of the dealers have transferred their operations from the selling to buying side of the market.

TIN PLATE.

As indicated by recent reports, the current tin plate production is exceptionally large and exceeds rather than falls short of expectations. Production in the first six months of the year was a trifle in excess of 17,000,000 base boxes. Reports for July are not available as yet, but a fair estimate is that production in the month was fully 3,000,000 boxes. If so, the unprecedented showing was made of July furnishing a larger output than the average of the first six months of the year. Invariably in the past the July output has represented a sharp curtailment on account of hot weather. This year, on account of the educational campaigns conducted the men have remained faithfully at work, as a recognized patriotic duty. The steel supply at tin plate mills for some time past has been fully adequate.

SHEETS.

Sheet bars furnished the sheet mills during July were insufficient for an average 60 per cent operation, and the output of sheets ran somewhat below the percentage, as compared with capacity. Difficulties in distributing sheets, so as to come as nearly as possible to meeting the more essential requirements, are increasing rather than decreasing. There is no definite prospect of materially larger sheet bar supplies, it being somewhat more probable that the increasing war steel requirements will necessitate further curtailment in the quantity of steel allowed to go into sheet bars.

OLD METALS.

Wholesale quotations in the Chicago district, which may be considered nominal, are as follows: Old steel axles, $41.52; old iron axles, $41.52; steel springs, $30.36; Number 1 wrought iron, $30.36; Number 1 cast iron, $27.50 to $27.75, all net tons. Prices for non-ferrous metals are as follows, per pound: Light copper, 20 cents; light brass, 11¼ cents; lead, 6 cents; zinc, 4¾ cents; cast aluminum, 23½ cents.

PIG IRON.

The demand for steelmaking grades of iron is tremendous and it has been intimated that a number of furnaces in the North, now blowing on foundry iron, will have to be switched over to basic before the fourth quarter is well advanced. If such action is taken the shortage of foundry iron will become more acute. Allocations of iron continue heavy and large tonnages were placed with the furnaces lately.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS.

PIG IRON

Basic	$32 00
Northern Fdy., No. 2	33 00
Southern Fdy., No. 2	37 50
Lake Sup. Charcoal	37 25-37 50
Malleable	33 50

FIRST QUALITY BRIGHT TIN PLATES.

		Per Box
IC	14x20	$16 80
IX	14x20	18 70
IXX	14x20	20 80
IXXX	14x20	22 15
IXXXX	14x20	23 65
IC	20x28	33 60
IX	20x28	37 40
IXX	20x28	41 60
IXXX	20x28	44 30
IXXXX	20x28	47 30

COKE PLATES.

Cokes, 180 lbs	20x28	$18 50
Cokes, 200 lbs	20x28	18 80
Cokes, 214 lbs	IC 20x28	19 40
Cokes, 270 lbs	IX 20x28	21 75

BLUE ANNEALED SHEETS.

No. 10 per 100 lbs.	$5 52
No. 12 per 100 lbs.	5 57
No. 14 per 100 lbs.	5 62
No. 16 per 100 lbs.	5 72

ONE PASS COLD ROLLED BLACK.

No. 18-20 per 100 lbs.	$6 32
No. 22-24 per 100 lbs.	6 37
No. 26 per 100 lbs.	6 42
No. 27 per 100 lbs.	6 47
No. 28 per 100 lbs.	6 52

GALVANIZED.

No. 16 per 100 lbs.	$7 02
No. 18-20 per 100 lbs.	7 17
No. 22-24 per 100 lbs.	7 32
No. 26 per 100 lbs.	7 47
No. 27 per 100 lbs.	7 62
No. 28 per 100 lbs.	7 77
No. 30 per 100 lbs.	8 27

POLISHED SHEET STEEL.

No. 24 per 100 lbs.	$7 82
No. 26 per 100 lbs.	7 87
No. 27 per 100 lbs.	7 92
No. 28 per 100 lbs.	8 02

SMOOTH SHEET STEEL.

	Per 100 lbs.
Wood's Smooth No. 20	$7 27
" " No. 22-24	7 32
" " No. 25-26	7 37
" " No. 27	7 42
" " No. 28	7 52

PATENT PLANISHED SHEET IRON.

Patent Planished Sheet Iron, 100 lbs., base No. 28 ..... $11 85

BAR SOLDER.

Warranted, 50-50 per lb.	57 c
Commercial, 45-55 "	52½c
Plumbers' "	47½c

SPELTER.

In Slabs 9½c

SHEET ZINC.

Cask lots	$22 00
Less than Cask lots	$22 50 to $23 00

COPPER.

Copper sheet, base 36c

LEAD.

American Pig	$8 50
Bar	9 00

Sheet.

Full coils per 100 lbs.	$11 00
Cut coils per 100 lbs.	11 25

TIN.

Pig tin	Nominal
Bar tin	Nominal

HARDWARE.

ADZES.

Carpenters'.
Plumbs 15%

Coopers'.
Barton's 15%
White's 15%

Railroad.
Plumbs 20%

AMMUNITION.

Caps, Percussion—per 1,000.
P. L., Waterproof, 1-10s 32%
G. D 32%
Musket 32%

Shells, Loaded—
Loaded with Black Powder 32%
Loaded with Smokeless Powder, medium grades 32%
Loaded with Smokeless Powder, high grade 32%

Winchester:
Smokeless Repeater Grade 32%
Smokeless Leader Grade 32%
Black Powder 32%

U. M. C.
Nitro Club 32%
Arrow 32%
New Club 32%

Gun Wads—per 1000

Winchester 7-8 gauge	$2 25
" 9-10 gauge	1 94
" 11-28 gauge	1 63

Powder.	Each
DuPont's Sporting, kegs	11 25
" " ½ kegs	5 90
" " ¼ kegs	3 10
DuPont's Canisters, 1-lb	56
" " ½-lb	32
" " ¼-lb	22
" Smokeless drums	43 50
" " kegs	22 00
" " ½-kegs	11 25
" " ¼-kegs	5 75
" " canisters	1 00
L. & R. Orange, Extra Sporting kegs	11 25
L. & R. Orange, Extra Sporting ½-kegs	5 90
L. & R. Orange, Extra Sporting ¼-keg	3 10
L. & R. Orange, Extra Sporting 1 lb. canisters	56
L. & R. Orange, Extra Sporting ½-lb. canisters	32
L. & R. Orange, Extra Sporting ¼-lb. canisters	22
Hercules "E. C." and "Infallible" 50 can drums	43 50
Hercules "E. C." kegs	22 00
Hercules "E. C.," ½-kegs	11 25
Hercules "Infallible," 25 can drums	22 00
Hercules "Infallible," 10 can drums	9 00
Hercules "E.C.," ¼-kegs	5 75
Hercules "E.C." and "Infallible" canisters	1 00
Hercules W. A. .30 Cal. Rifle, canisters	1 25
Hercules Lightning Rifle, canisters	1 25
Hercules Sharpshooter Rifle, canisters	1 25
Hercules Unique Rifle, canisters	1 50
Hercules Bullseye Revolver, canisters	1 00

ANVILS.

Trenton, 70 to 80 lbs. ..... 9½c per lb.
Trenton, 81 to 150 lbs. ..... 9½c per lb.

ASBESTOS.

Board and Paper, up to 1/16" .. 17c per lb.
Thicker ... 18c per lb.

AUGERS.

Boring Machine 60%
Irwin's ..... Nets
Carpenter's Nut ..... 50&10%

Hollow.

Bonney's per doz.	$30 00
Stearns, No. 3 " "	60 00

Post Hole.

Digwell, 8-inch per doz.	$12 50
Iwan's Post Hole and Well	Nets.
Vaughan's, 4 to 9-in. per doz.	10 25

Ship.
Ford's, with or without screw ... 15%
Snell's " " " ... 15%

AWLS.

Brad.

No. 3 Handled per doz.	$0 50
No. 1050 Handled "	1 05
Shouldered, assorted 1 to 4, per gro.	4 00
Patent asst'd, 1 to 4 "	85

Harness.

Common "	1 05
Patent "	1 00

Peg.

Shouldered "	1 60
Patent "	75

Scratch.

No. 1 handled per doz.	65
No. IS, socket han'ld. "	1 35
No. 7 Stanley "	1 95

AXES.

Boys' Handled.

Niagara "	9 25

Broad.

Plumbs, West, Pat	List
" Can. Pat	$53 00
" Firemen's (handled), per doz.	$19 00

Single Bitted (handled).

Warren Silver Steel	15 50
Warren Blue Finished	15 00
Matchless Red Pole	14 00

Single Bitted (without handles).

Warren Silver Steel	13 50
Warren Blue Finished	12 50
Matchless Red Pole	11 50

Double Bitted (without handles).
Warren's Natl. Blue, 3½ to 4½ lb. ..... per doz. 17 50

The above prices on axes of 3 to 4 lbs. are the base prices.
3½ to 4½ lbs. advance 25c.
4 to 5 lbs. advance 50c.
4½ to 5½ lbs. advance 75c.

BAGS, PAPER NAIL.

Pounds	10	16	20	25
Per 1,000	$5 00	6 50	7 50	9 00

BALANCES, SPRING.

Pelouze 20%

BARS, CROW.

Pinch or Wedge Point, per cwt. .. $8 00

BASKETS.

Clothes.

Small Willow per doz.	10 00
Medium " "	11 50
Large " "	13 50

Galvanized Steel.

	½ bu.	1 bu.	1½ bu
Per doz.	$8 00	$11 50	15 00

BEATERS.

Carpet.	Per doz.
No. 17 Tinned Spring Wire	$ 1 10
No. 18 Spring Wire coppered	1 40
No. 10 Preston	1 10

Egg.	Per doz.
No. 50 Imp. Dover	$ 1 10
No. 102 " " tinned	1 35
No. 150 " " hotel	2 10
No. 10 Heavy hotel tinned	2 10
No. 13 " " "	3 30
No. 15 " " "	3 60
No. 18 " " "	4 50

BELLOWS.

Blacksmiths' 40%

Hand.

	8	9	10	12
Per doz.	$8 00	9 00	10 00	12 75

Moulders'.
12-inch ..... Per doz. 15 00

BELLS.

Call.
3-inch Nickeled Rotary Bell, Bronsed base ..... per doz. $5 00

Cow.
High Grade 60%
Kentucky 35%

Door.	Per doz.
New Departure Automatic Rotary	$7 50
3 -in. Old Copper Bell	5 00
3 -in. Old Copper Bell, fancy	7 00
3 -in. Nickeled Steel Bell	5 50
3½-in. Nickeled Steel Bell	6 00

Hand.
Hand Bells, polished 15%
White Metal 15%
Nickel Plated 10%
Swiss 15%
Silver Chime 10%

Miscellaneous.
Church and School, steel alloys ... 30%

Farm, lbs.	40	50	75	100
Each	$2 25	3 00	4 00	5 50

BEVELS, TEE

Stanley's, rosewood handle, new list ..... Nets
Stanley's iron handle ..... Nets

BINDING, OILCLOTH.

Zinced 60%
Brass ..... 40&10%
Brass, plated ..... 60&10%

BITS.

Auger.
Jenning's Pattern 50%
Ford's Car and Machine 15%
Ford's Ship 30%
Irwin 35%
Russell Jenning's 30%
Clark's Expansive ..... 50&5%
Steer's " Small list, $22 00 .. 25%
" " Large " $26 00 .. 25%
Irwin Car ..... 35&10%
Ford's Ship Auger pattern Car 15%

Center 10%

Countersink.

No. 18 Wheeler's	per doz.	$1 80
No. 20 "	"	2 40
American Snailhead	"	1 10
" Rose "	"	1 30
" Flat	"	1 20
Mahew's Flat	"	1 00
" Snail	"	1 50

Dowell.
Russell Jennings 30%

Gimlet.

Standard Double Cut		25%
German Pattern	per doz.	$0 75
German	"	80
Gouge	"	80
Spoon	"	15%
Countersink	"	1 30

Reamer.

Jenning's Square	"	2 50
Standard Square	"	2 00
American Octagon	"	1 75

Screw Driver.

No. 7 Common	each	75
No. 1 Triumph	"	1 25